

# SGS II



# Schedule of Growing Skills II

*Martin Bellman, Sundara Lingam and Anne Aukett*

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User's Guide



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 **GL**  
Assessment®

Illustrations by Susan Lingam and Toto Duo.

Published by GL Assessment,  
1st Floor, Vantage London, Great West Road, Brentford, TW8 9AG.

GL Assessment is part of GL Education.

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Code: 0090006034

17(12.20)

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# Introduction

The *Schedule of Growing Skills (SGS)* is a developmental screening procedure which is based firmly on the well-known and well-respected developmental sequences designed by Dr Mary Sheridan (see *From Birth to Five*, Sheridan, 1985). Supplemented by a few well-tried items not included in Mary Sheridan's work, it is the fruit of several years of research, development and trialling on children throughout the United Kingdom. This edition has been boosted by the following revisions: analysis of the item order to ensure that all items are in correct developmental sequence; carrying out a national standardization of 348 children covering the complete age range, resulting in a new normative data for the older age range; and updating the administration instructions so **all** items are explained in full. For further information about the full development process please see the *SGS II Reference Manual*.

The main purpose of the *Schedule of Growing Skills* is to provide an accurate and reliable method of developmental screening, to be used as part of child health surveillance programmes. Practice in this area varies widely as various instruments are used by different professional groups in different areas of the country. The authors hope that *SGS* will provide a standard for developmental screening, and so encourage common practice. It will also lend itself for use in first and second level developmental assessment.

In order to meet its aims, *SGS* has been designed to be quick and easy to use: the administration time is approximately 20 minutes, and users will require little training (see the *SGS Reference Manual*). This User's Guide provides administration guidelines for **all** items and explains how to score

the items and interpret the scores. *SGS* will provide information on whether the child is developing normally and whether there is a need for referral to more detailed assessment or therapy. The *Schedule of Growing Skills* is designed to act as an indicator of where a child may be having difficulties. It is not an in depth diagnostic tool, although it does provide diagnostic pointers to the nature of a child's problem.

The *Schedule of Growing Skills* fits in with other health promotion/surveillance activities and will be made available to all practitioners who undertake developmental screening. Its content and approach will be familiar to most health visitors and paediatricians. Given present trends in developmental screening practice, we hope that *SGS* will also be an invaluable instrument for the growing number of GPs who are taking on the responsibility for child health surveillance.

# How to use the *Schedule of Growing Skills II*

## The Components

### The Record Form

The Record Form is a four page permanent record of a child's specific skills at each screening session carried out between birth and five years. On completion of the record, the practitioner can calculate numerical scores based on the child's performance. The Record Form can be kept with clinic records and/or inserted into the national Personal Child Health Record (*PCHR*), since health visitors have commented that it is useful in counselling parents about child development for health education purposes.

The Record Form (see Figure 1.1) lists 179 items, divided into nine skill areas:

- Passive postural skills
- Active postural skills
- Locomotor skills
- Manipulative skills
- Visual skills
- Hearing and language skills
- Speech and language skills
- Interactive social skills
- Self-care social skills

The nine-area format is extended from the familiar four STYCAR areas, heightening SGS’s sensitivity by making information about children’s specific skills more easily accessible.

The skill areas are then further subdivided into ‘skill sets’. The developmental field of Manipulative Skills, for example, is made up of four skill sets: ‘Hand skills’, ‘Bricks’, ‘Drawing’ and ‘Draw-a-Person’.

Figure 1.1: The Schedule of Growing Skills II Record Form (page 2)

The image shows a sample of the 'Schedule of Growing Skills II - Record Form'. The form is divided into several main sections, each with a list of skills and a grid for recording dates and observations. The sections are:

- PASSIVE POSTURAL SKILLS**
  - Supine Position**
    - Head to midline
    - Lifts legs into vertical position and grasps foot (one finger)
  - Ventral Suspension**
    - Head in line with body; hips semi-extended
    - Head above line of body; hips and shoulders extended
  - Pull to Sit**
    - Head lag on pulling; when back vertical, head held momentarily erect before falling forwards
    - Little or no head lag
    - Braces shoulders and pulls self up
  - Sitting Position (supported by adult)**
    - Back curved
    - Back straight
- ACTIVE POSTURAL SKILLS**
  - Prone Position**
    - Head sideways, resting on elbows, humps high close with elbows flexed
    - Lifts head momentarily; humps high humps flat
    - Supports weight on flattened palm and extended arms
    - Gets into crawling position
  - Sitting Position (unsupported)**
    - Sits alone momentarily without support (or knee to the corner of hip)
    - Gets into sitting position from either prone or supine
  - Standing**
    - Kick standing; heels wobble
    - Heel standing
- LOCOMOTOR SKILLS**
  - Movement and Balance**
    - Rolls and squirms to move about
    - Attempts to crawl, creep or shuffle
    - Walks with hands held, creep or shuffle
    - Walks around furniture (or pushing wheeled toy)
    - Walks alone, feet wide apart, arms up for balance
    - Walks alone, feet only slightly apart, can turn corners and stop suddenly
    - Picks up objects from floor without falling
    - Runs confidently, stopping and starting with care and avoiding obstacles
    - Jumps taking both feet off the ground
    - Walks tiptoe
    - Runs tiptoe
    - Hops on one foot for 3 steps
    - Heel-toe walking forwards (for a minimum of 4 steps)
    - Stands on each foot separately for a count of 8 seconds
  - Stairs**
    - Crawls upstairs
    - Walks upstairs with hand held, two feet to a step
    - Walks up and down stairs confidently, two feet to a step
    - Walks alone upstairs (with alternating feet) and downstairs (two feet to a step)
    - Walks alone upstairs and downstairs - one foot per step (solid trolley)
    - Runs upstairs
- MANIPULATIVE SKILLS**

Following much discussion and feedback from users throughout the country, a decision was made to investigate the cognitive element of various items in SGS II. This brings the Schedule of Growing Skills into line with other developmental measures in common use (for example, Griffiths, Bayley, WPPSI) and enhances understanding of the nature of any identified

abnormalities. The items making up the ‘Cognitive skill’ area are included in the old nine areas and therefore this additional parameter does not increase the time or difficulty of administering *SGS II*. The items were selected because their successful performance depends on the child having ‘thinking’ (cognitive) ability as well as physical function. It can be argued that this applies to many of the items but a few important ones were considered to be sufficiently discriminatory of cognitive function to comprise a separate skill area. This is considered in more detail in Chapter 3 of the Reference Manual which discusses the value of the cognitive skill area.

Although the Record Form is presented in a highly-structured format, experience has shown that once the practitioner is familiar with the procedure it will be used in an informal way, as part of an interview and observation session with the child and parents. This may take place either in a clinic or at the family’s home. The Record Form now has boxes for ethnic group and interpreter information. These boxes are optional, unless this information is required locally.

## **The Profile Form**

A visual summary of the child’s development status is generated by transferring the total scores of each skill area from the Record Form onto the *Schedule of Growing Skills II* Profile Form (see Figure 1.2).

Figure 1.2: The Schedule of Growing Skills II Profile Form

**SCHEDULE OF GROWING SKILLS II**  
**Profile Form**

Child's name: (Surname) .....  
Address: (Forenames) .....

Date of Birth: .....  
Case/NHS no: ..... Age: .....  
I recommend the following action:  
a) To be seen in  months for recall  
 months for next routine examination

Examined by: .....  
Title: .....  
ON: ..... Day / Month / Year  
At: (name of clinic) .....  
Signature: .....

b) Referral to: .....

Age (months)	Posture	Active Posture	Skill Areas								Age (months)	
			Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-care Social	Cognitive		
60 mths			20	20	20	21	20	21	24	22	33	60 mths
48 mths			19	19	19	19	19	20	23	21	30	48 mths
36 mths			15	15	15	17	17	18	20	18	22	36 mths
30 mths			14	14	14	16	16	17	19	17	20	30 mths
24 mths			13	13	13	15	15	16	18	16	18	24 mths
18 mths			11	11	11	13	13	14	16	14	16	18 mths
15 mths			10	10	10	12	12	13	15	13	15	15 mths
12 mths			9	9	9	11	11	12	14	12	14	12 mths
10 mths			8	8	8	10	10	11	13	11	13	10 mths
8 mths			7	7	7	9	9	10	12	10	12	8 mths

The top section of the Profile Form acts as a referral or information letter to secondary level specialist practitioners. The Profile Form is an unambiguous, easy-to-understand bridge between the screening and detailed assessment stages of an individual child’s care programme that improves the flow of information between different professional groups and saves the time usually spent in writing reports and detailed referral notes. It comprises a top copy and three self-generating carbon copies. For ease of use it is available in A5 format for insertion in the national *PCHR*.

SGS’s quantitative scores can be stored easily in a manual or an automated information system. This eases access to essential clinical information, as well as providing a data bank for use in identifying local health trends, planning resources, budgets and research.

For full details of how to complete the Profile Form, please see pages 10–12.

## **The User's Guide**

As its name suggests, the User's Guide is intended for anyone who administers, scores and interprets the *Schedule of Growing Skills II*. It contains scoring and interpretation instructions for the Record Form and the Profile Form, as well as more detailed information about the administration of all items in the Record Form.

## **The Set of Materials**

The following components are included in the *Schedule of Growing Skills II* Set of Materials.

- The User's Guide
- 12 one-inch bricks
- Cup
- Rattle
- Bead on a string
- Doll
- Brush
- Spoon
- Small ball
- Colour cards + Matching card
- Picture book
- Pegboard and pegs
- Pom-pom
- Formboards
- Distant Vision Letter
- 9 Letter Key Card

Users will also require the following items of equipment, which should be easily found in any clinic:



Figure 1.3: Example of a completed Record Form (front page)\*

<b>SCHEDULE OF GROWING SKILLS II</b>				
<b>Record Form</b>				
Case/NHS No. <u>GFKS 123</u>	Health visitor <u>JANE THOMPSON</u>			
Name (Family name) <u>BENNETT</u>	Date of birth <u>28 MARCH 93</u>			
(Forenames) <u>PAUL JOHN</u>	Expected date of birth <u>20 MARCH 93</u>			
Address <u>41 DRAYTON CLOSE</u>	Gender <input checked="" type="radio"/> Male / Female (please circle)			
<u>SHEFFIELD</u>	Ethnic group <u>EUROPEAN</u>			
Name and Address of GP <u>DR. S. ARNOLD</u>	Interpreter <input type="checkbox"/> (tick if used)			
<u>FERNHILL HEALTH CENTRE</u>				
	<b>Assessment One</b>	<b>Assessment Two</b>	<b>Assessment Three</b>	<b>Assessment Four</b>
Date and clinic	<u>30/1/93</u> <u>REDGATE CLINIC</u>	<u>28/7/94</u> <u>REDGATE CLINIC</u>	<u>2/4/96</u> <u>REDGATE CLINIC</u>	
Age	<u>8 months</u>	<u>16 months</u>	<u>36 months</u>	
Comments	<u>Normal.</u>	<u>Normal.</u>	<u>Item 39</u> <u>unsteady</u> <u>and lacking</u> <u>in confidence</u> <u>climbing</u> <u>stairs.</u>	
Action	<u>Recall in</u> <u>8 months</u> <u>(Jul 94)</u>	<u>Recall in</u> <u>20 months</u> <u>(MAR 96)</u>	<u>Recommended</u> <u>that GP</u> <u>should monitor</u> <u>development</u> <u>of locomotor</u> <u>skills</u>	
Examiner	<u>J. Thompson</u>	<u>J. Thompson</u>	<u>J. Thompson.</u>	

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\*The Record Form is undersized A4 (200 x 270mm) and the Profile Form is A4 (210 x 297mm), and have been photographed down for reproduction in this book. Pages 2, 3 and 4 of the Record Form are reproduced in Figure 1.6 (pp15-17). Please note that all data used in the worked examples are entirely fictitious.

‘Hand skills’, ‘Bricks’, ‘Drawing’ and ‘Draw-a-Person’ (see Figure 1.6, pp.15–17).

3. You may wish to work through every item in a skill set until the most advanced item the child can perform has been reached and marked in the response column. In practice it is not necessary to go through all items laboriously in sequence. Your clinical experience will usually give you a good idea of a child’s abilities. You will be able to go into the skill set at the expected level and then adjust backwards or forwards until the most advanced item has been performed. After a little experience this approach becomes easier; eventually it becomes second nature.
4. You may feel that the *quality* of a child’s performance in an item is poor, even though the task has been completed. It is very important to note concern over quality of performance as this may indicate that a skill has only recently been acquired, or may suggest that the child has neuro-developmental problems. If in your clinical judgement the quality of performance of an item is poor, you should mark the response column with the letter ‘Q’. This information will be transferred to the Profile Form, and can thus be communicated as an area of concern when referring the child to a specialist.

One of the clearest examples of this may sometimes occur in the ‘Bricks’ skill set. A child may be able to build a tower using the number of bricks appropriate to his or her age, but the quality of the movements associated with the achievement may be suspect. The child may show a tremor on approach, or may hold the brick in an immature way. Even though the building score is appropriate to the child’s age, the quality of the response may indicate possible neuro-muscular problems. It is important for all examiners to note wherever the quality of a passed item is suspect. However, please note that items marked ‘Q’ still score.

5. Initially, you may find difficulty in interpreting the requirements of a particular item, but all the items are described in detail, with the User’s Guide also giving advice and guidance on each item tested. As you gain more experience in the use of *SGS*, you will need to refer to the User’s Guide less and less frequently.
6. All relevant skill areas should be worked through in the above way.

## **Scoring the Skill Areas**

1. To arrive at the total score for each skill area, it is necessary to add up the **highest** scores achieved in each skill set. The small numbers to the right of the items indicate the score the child has achieved. The total score in the skill area is the sum of the scores of the single most advanced item in each skill set. Do not add up the score of every item performed.
2. If a child fails an item but passes a higher item within a skill set, it is the higher score that counts. After a little experience, the rare anomaly caused by this general rule is easily recognized.
3. In three skill areas, ‘Visual skills’, ‘Hearing and language skills’ and ‘Speech and language skills’, the first skill set is only appropriate to children of up to 12 months of age. If older children are assessed in these areas, they must be given the maximum score for these skill sets even if they have not been screened on them so that the Profile Form can be completed correctly.

## **Scoring the Cognitive Items**

The ‘Cognitive’ section should be scored only when there is suspicion that the child has delayed cognitive skills or to investigate a possible discrepancy between that and other developmental fields.

The scoring system is different from other fields as it is performed by a simple item count. The total number of highlighted items performed is recorded in the Cognitive Skills box on the Record Form and then transferred to the Cognitive column on the Profile Form and the age equivalent read off horizontally, as for other fields of development.

The Cognitive scoring method contrasts with the system for these other fields in which the total score of only the highest items performed by the child in each skill set are added together and the scores for earlier items are ignored. It is therefore important to make sure that the child can actually perform each item and, if it is intended to use the Cognitive skills field, to run through the highlighted items and tick each one that is performed so

that the number of ticks can be easily counted. With practice, this does not add significantly to the administration time for using the *Schedule of Growing Skills II*.

## **The Profile Form**

When all relevant skill areas on the Record Form have been completed and the scores totalled, they are transferred onto the Profile Form. A visual summary of the child’s strengths and weaknesses are generated by converting the scores to developmental ages (see Figure 1.4).

Stages for completing the Profile Form are as follows:

1. Fill in the details of the screening session, including the child’s personal details at the top of the Profile Form.
2. If the child’s age is 48 months or less, draw a horizontal line across the chart to represent the chronological age (C.A.). The line should go through the printed numbers on each side of the chart in the middle of the developmental age level blocks. If the exact age is not shown on the form, then draw the line **through the next lower printed age**. When the child is more than four years old there is a special rule that must be followed for drawing the horizontal line to represent the chronological age: if the actual age is between four years and six months (54 months) and four years and 11 months (59 months), draw the line on the intersection on the chart between 48 and 60 months; if the actual age is between four years exactly (48 months) and four years and five months (53 months), draw the line **through the printed 48-month age level**. For the sake of clarity we recommend that the exact chronological age is written in the margin beside the line.

This rule is to compensate for the relatively large age intervals of 12 months over 36 months of age, compared with the smaller intervals of six months or less below 36 months. In this way, the guideline which defines a significant delay as being one where the developmental age is more than one age interval below the line representing the chronological age, remains valid. This is illustrated in Figure 1.5 (p.13).

Figure 1.4: Example of a completed Profile Form

## SCHEDULE OF GROWING SKILLS II

GL Assessment

### Profile Form

Child's name: (Surname) BENNETT Examined by: JANE THOMPSON  
 (Forenames) PAUL JOHN Title: HEALTH VISITOR  
 Address: 41 DRAYTON CLOSE On: 28 / 7 / 94  
SHEFFIELD Day Month Year  
 Date of Birth: 28 MAR 93 Age: 16 MONTHS At: (name of clinic) REDGATE  
 Case/NHS no. GFTKS.123 Signature: J. Thompson

I recommend the following action:

a) To be seen in  months for recall      b) Referral to:

20 months for next routine examination

Age (months)	Skill Areas										Age (months)
	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social	Cognitive	
60 mths			20 19	28 27	20	21 20	22 21	24	23 23	24 25	60 mths
48 mths			18 17	26 25 24	19	19 18	20 19	23	20 19 18	31 30 29 28	48 mths
36 mths			16 15	23 21	18 17	17 16	18 17	22 20	17 16	27 26 25 24	36 mths
30 mths			14 13	20 19 18	16	15 14	16 15	19 18	15 14	23 22 21 20	30 mths
24 mths			12 11 10	17 16 15	15 14	13 12	14 13 12	17 16	13 12 11	19 18 17 16	24 mths
18 mths			9 8	14 13 12	13	11 10	11	15 14	10 9	15 14 13 12	18 mths
16 mths			8 7	11 10	12	10	10	13 11	7 6	11 10 9	16 mths
12 mths		12	4 3	9 8	11 10	8 7	7 6	10 8	5 4	8 7 6	12 mths
10 mths		11 10	2 1	7	9	6	5	7	3	5 4	10 mths
8 mths		9 8 7		6	8	5	4	6	2	3 2	8 mths
6 mths		6 5 4		5 4	7 6	4 3	3	5 4	1	1	6 mths
3 mths		3		3 2	5 4	2	2	3 2			3 mths
1 mth		2		1	3 2			1 1			1 mth
0 mths		1			1	1					0 mths
Skill areas	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social	Cognitive	
*Quality											

\*Use a "Q" to indicate concern over quality of performance

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In the first example (a) the developmental ages are all within one age interval of the chronological age line and the child is therefore within normal limits. However, in the second example (b) the developmental age is two age intervals below the chronological age line in two fields and this indicates that referral for secondary assessment should be considered.

3. The total score from a skill area should be located in the appropriate column on the chart and the age band blocked in.
4. By reading across to the right or left of the Profile Form, the equivalent developmental age will become apparent.
5. All skill areas should be completed in this way, enabling you to compare areas of strength and weakness across the chart.
6. Concerns about quality of performance within a skill area can be marked at the bottom of the chart with a cross or ‘Q’.
7. Please ensure that you press hard using a ball-point pen when completing the Profile Form, so that it provides clear, legible carbon copies.
8. Once the Profile has been interpreted (see pp.27–29), the referral section at the top of the Profile Form can be filled in as relevant.

Having described how to use the Record Form and the Profile Form, we hope that the following worked example will give you a real flavour of how each of them works in practice.

Figure 1.5: Chronological and developmental age as shown on the Profile Form

Example a) Chronological age over 54 months

Age (months)	Skill Areas										Age (months)
	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social	Cognitive	
60 mths			20 19	26 27	20	21 20	22 21	24	23 22 21	34 33 32	60 mths
48 mths			18 17	26 25 24	18	18 16	19	23	20 19 18	31 30 29 28	48 mths
36 mths			16 15	23 22 21	18 17	17 16	18 17	22 21 20	17 16	27 26 25 24	36 mths
30 mths			14 13	20 19 18	16	15 14	16 15	19 18	15 14	23 22 21 20	30 mths
24 mths			12 11 10	17 16 15	15 14	13 12	14 13 12	17 16	13 12 11	19 18 17 16	24 mths
18 mths			9 8	14 13 12	13	11 10	11	15 14	10 9 8	15 14 13 12	18 mths
15 mths			6 5	11 10	12	9	10 9 8 11	13 12 11	7 6	11 10 9	15 mths
12 mths		12	4 3	9 8	11 10	8 7	7 6	10 9 8	5 4	8 7 6	12 mths

C.A. 56mths

Example b) Chronological age 48–53 months

Age (months)	Skill Areas										Age (months)
	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social	Cognitive	
60 mths			20 19	28 27	20	21 20	22 21	24	23 22 21	34 33 32	60 mths
48 mths			18 17	26 25 24	18	18 16	19	23	20 19 18	31 30 29 28	48 mths
36 mths			16 15	23 22 21	18 17	17 16	18 17	22 21 20	17 16	27 26 25 24	36 mths
30 mths			14 13	20 19 18	16	15 14	16 15	19 18	15 14	23 22 21 20	30 mths
24 mths			12 11 10	17 16 15	15 14	13 12	14 13 12	17 16	13 12 11	19 18 17 16	24 mths
18 mths			9 8	14 13 12	13	11 10	11	15 14	10 9 8	15 14 13 12	18 mths
15 mths			6 5	11 10	12	9	10 9 8 11	13 12 11	7 6	11 10 9	15 mths
12 mths		12	4 3	9 8	11 10	8 7	7 6	10 9 8	5 4	8 7 6	12 mths

C.A. 53mths

## **Case Study 1: Screening with the *Schedule of Growing Skills***

Figure 1.6 shows pages 2, 3 and 4 of the completed Record Form. The subject, Paul (fictional identification details), was screened on three separate occasions, at eight months, 16 months and 36 months. The three resulting profiles, illustrated at the end of this example (Figures 1.7, 1.8 and 1.9), show clearly how *SGS* highlights developmental progress over time. However, this example concentrates on the first screening session, which took place when Paul was eight months old; his hearing was tested by distraction on the same occasion. A health visitor ran the session at the local child health clinic. The opening few minutes were spent explaining the procedure and purpose of developmental screening to Paul’s mother, and mother and child were then allowed to play together with some of the toys available. Such preliminaries encourage both parent and child to relax before the screening session begins.

Paul’s mother was not worried about his progress: his past history was uneventful and she had no reason to suspect an abnormality. The health visitor therefore began each skill area with items corresponding to Paul’s chronological age. As he was aged between six and 12 months, she began with ‘Passive postural skills’.

### **Passive postural skills**

This area examines the ‘passive’ movements and positions shown by the child under different conditions imposed by the examiner. When Paul was placed in the supine position on an examination couch (though a carpeted floor would have sufficed) he was observed to be actively moving all his limbs, holding his legs up in the air and trying to grasp his feet in his hands. He therefore achieved the maximum item in this skill set (Item 2: ‘Lifts leg into vertical position and grasps foot’), which was ticked in the first column. Paul was then put into ventral suspension and as his posture corresponded with Item 4 (‘Head above line of body, hips and shoulders extended’), a tick was also entered in this column.

The next skill set is entitled ‘Pull to sit’. Paul did not brace his shoulders and pull himself up, but had good head control and therefore Item 6 (‘Little

Figure 1.6: Case study of Paul: the completed Record Form

*The Schedule of Growing Skills II - Record Form*

Screening Dates		10/11/06	11/11/06	12/11/06	1/12/07
<b>PASSIVE POSTURAL SKILLS</b>					
<b>Supine Position</b>					
1. Head in midline	1				
2. Lifts legs into vertical position and grasps foot (foot regard)	2	✓			
<b>Ventral Suspension</b>					
3. Head in line with body, hips semi-extended	1				
4. Head above line of body, hips and shoulders extended	2	✓			
<b>Pull to Sit</b>					
5. Head lag on pulling, when body vertical; head held momentarily erect before falling forwards	1				
6. Little or no head lag	2	✓			
7. Braces shoulders and pulls self up	3				
<b>Sitting Position (supported by adult)</b>					
8. Back curved	1				
9. Back straight	2	✓			
<b>PASSIVE POSTURAL SKILLS SCORE</b>		2			
<b>ACTIVE POSTURAL SKILLS</b>					
<b>Prone Position</b>					
10. Head sideways, resting on cheeks, buttocks high with knees flexed under abdomen, arms close to chest with elbows flexed	1				
11. Lifts head momentarily, buttocks high	2				
12. Holds up head and upper chest on forearms, with buttocks flat	3				
13. Supports weight on flattened palms and extended arms	4	✓			
14. Gets into crawling position	5				
<b>Sitting Position (unsupported)</b>					
15. Sits alone momentarily without support	1				
16. Sits alone for prolonged periods (at least to the count of 10)	2	✓			
17. Gets into sitting position from either prone or supine	3				
<b>Standing</b>					
18. Held standing, bears some weight on feet	1	✓			
19. Held standing, takes full weight on feet	2				
20. Stands holding on	3				
21. Pulls self to stand	4				
<b>ACTIVE POSTURAL SKILLS SCORE</b>		7			

Screening Dates		10/11/06	11/11/06	12/11/06	1/12/07
<b>LOCOMOTOR SKILLS</b>					
<b>Movement and Balance</b>					
22. Rolls and squirms to move about	1				
23. Attempts to crawl, creep or shuffle	2				
24. Walks with hands held, taking full weight on feet	3				
25. Walks around furniture (or pushing wheeled toy)	4				
26. Walks alone, feet wide apart, arms up for balance	5		✓		
27. Walks well, feet only slightly apart, can turn corners and stop suddenly	6				
28. Picks up objects from floor without falling	7				
29. Runs confidently, stopping and starting with care and avoiding obstacles	8				
30. Jumps taking both feet off the ground	9		✓		
31. Walks tiptoe	10				
32. Runs tiptoe	11				
33. Hops on one foot for 3 steps	12				
34. Heel-to-toe walking forwards (for a minimum of 4 steps)	13				
35. Stands on each foot separately for a count of 8 seconds	14				
<b>Stairs</b>					
36. Crawls upstairs	1		✓		
37. Walks upstairs with hand held, two feet to a step	2				
38. Walks up and down stairs confidently, two feet to a step	3				
39. Walks alone upstairs (with alternating feet) and downstairs (two feet to a step)	4	Q		✓	
40. Walks alone upstairs and downstairs - one foot per step (adult fashion)	5				
41. Runs upstairs	6				
<b>LOCOMOTOR SKILLS SCORE</b>		6	1.5		
<b>MANIPULATIVE SKILLS</b>					
<b>Hand Skills</b>					
42. Hands closed and thumb turned in	1				
43. Hand regard and finger play	2				
44. Claps hands and presses palms together	3				
45. ■ Palmar grasp	4				
46. ■ Passes toy from one hand to another	5				
47. ■ Holds two cubes - one in each hand, bringing them together	6	✓			
48. ■ Inferior pincer grasp	7				
49. ■ Neat pincer grasp	8				
50. ■ Throws toys to the floor deliberately (casting)	9				
51. ■ Turns pages of a book, several at a time	10		✓		
52. ■ Turns pages of a book, one at a time	11				
53. ■ Puts 10 pegs into the cup in 30 seconds	12			✓	
54. ■ Puts 8 pegs into the pegboard in 30 seconds	13				

<b>KEY</b>
■ Stimulus material needed for this item.
Ⓚ This item contains a cognitive element.
Q Use when quality of performance is questioned. Still score item.

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Figure 1.6: continued

Screening Dates		6/11/19	6/11/19	6/11/19	
<b>MANIPULATIVE SKILLS (CONT)</b>					
<b>Bricks</b>					
55	■ Tower of 2 bricks	1			
56	■ Tower of 3 bricks	2			
57	■ Tower of 4 to 6 bricks	3			
58	■ Tower of 7+ bricks	4	✓		
59	■ Imitates bridge	5			
60	■ Builds 3 steps with 6 bricks after demonstration	6			
<b>Drawing</b>					
61	■ To and fro scribbles	1	✓		
62	■ Circular scribbles	2			
63	■ Imitates vertical and/or horizontal line	3			
64	■ Imitates circle	4	✓		
65	■ Imitates cross	5			
66	■ Imitates square	6			
<b>Draw-a-Person Test</b>					
67	■ Child draws head and one other part	1			
68	■ Child draws head, legs and arms (two)	2			
69	■ Child draws face, trunk, legs, arms	3			
<b>MANIPULATIVE SKILLS SCORE</b>			6	11	19
<b>VISUAL SKILLS</b>					
<b>Visual Function</b>					
70	■ Turns towards diffuse light	1			
71	■ Briefly fixates on pom-pom at 30cm	2			
72	■ Follows dangling object through 90°	3			
73	■ Follows dangling object through 180°	4			
74	■ Converges eyes on approaching object	5			
75	■ Finger points accurately at small object	6	✓	✓	
<b>Visual Comprehension</b>					
76	■ Watches falling toy, but does not look for it on the ground (no object permanence)	1	✓		
77	■ Looks toward the correct place for fallen toy (object permanence)	2			
78	■ Searches for the lost toy	3			
79	■ Watches movements for people at distance or out of window with interest	4			
80	■ Finger points to distant objects	5			
81	■ Shows interest in pictures	6			
82	■ Recognizes details of Picture Book	7	✓		
83	■ Completes shape formboard	8			
84	■ Completes fish formboard	9			
85	■ Recognizes minute details of the picture	10			
86	■ Matches 2 colours	11			
87	■ Matches 4 colours	12	✓		
88	■ Matches all 10 colour cards	13			
89	■ Cooperates with linear chart vision test (6 metres)	14			
<b>VISUAL SKILLS SCORE</b>			7	13	13

Screening Dates		6/11/19	6/11/19	6/11/19	
<b>HEARING AND LANGUAGE SKILLS</b>					
<b>Hearing Function</b>					
90	■ Startled by sudden noise	1			
91	■ Responds to voice	2			
92	■ Looks toward sound of parent's voice	3	✓	✓	
<b>Comprehension of Language</b>					
93	■ Turns head towards sound source	1			
94	■ Is attentive to everyday sounds	2	✓		
95	■ Understands 'no'/'bye-bye'	3			
96	■ Recognizes own name	4			
97	■ Shows understanding of names of familiar objects or people	5			
98	■ Can select 2 out of 4 objects	6	✓		
99	■ Can point to 2 named body parts (e.g. nose and hands)	7			
100	■ Can point to doll's body parts (e.g. eyes and tummy)	8			
101	■ Follows a two-step command	9			
102	■ Shows understanding of verbs, using action pictures	10			
103	■ Shows understanding of functions of objects, using pictures	11			
104	■ Shows understanding of prepositions	12		✓	
105	■ Shows understanding of size adjectives	13			
106	■ Shows understanding of negatives	14			
107	■ Follows a command with two instructions	15			
108	■ Understands complicated questions	16			
109	■ Follows a command with three instructions	17			
110	■ Understands negatives in complex sentence statements	18			
<b>HEARING AND LANGUAGE SKILLS SCORE</b>			5	9	15
<b>SPEECH AND LANGUAGE SKILLS</b>					
<b>Vocalization</b>					
111	■ Makes occasional grunting sounds	1			
112	■ Vocalizes when pleased	2			
113	■ Laughs, chuckles and squeals in play	3	✓		
114	■ Babbles continually and tunefully	4	✓	✓	
115	■ Imitates adult, playful sounds (coughs, 'berr', smacks lips)	5			
<b>Expressive Language</b>					
116	■ Uses incessant jargon containing vowels and many consonants	1			
117	■ Uses one word with meaning	2			
118	■ Communicates by mixed gesture and vocalization	3	✓		
119	■ Uses several words with meaning (at least 4)	4			
120	■ Uses more than 7 words with meaning	5			
121	■ Attempts to repeat words when used by others	6			

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Figure 1.6: continued

Screening Dates		1	2	3	4
<b>SPEECH AND LANGUAGE SKILLS (CONT)</b>					
122. Puts 2 or more words together to form simple sentences	7				
123. Names familiar objects and pictures	8				
124. Speech usually understood by mother	9				
125. Uses question words (e.g. what, where?) and uses 2 personal pronouns (e.g. me, you)	10		✓		
126. Able to carry on simple conversations and describe events	11				
127. Knows several nursery rhymes or pop songs or commercials	12				
128. Can give fuzzy account of recent events	13				
129. Speech fluent and clear	14				
130. ■ Can produce a sentence of 5 or more words	15				
131. ■ Can describe a sequence of events	16				
132. ■ Can give an explanation of events	17				
<b>SPEECH AND LANGUAGE SKILLS SCORE</b>		3	7	14	

Screening Dates		1	2	3	4
<b>INTERACTIVE SOCIAL SKILLS</b>					
<b>Social Behaviour</b>					
133. Smiles	1				
134. Responds to friendly handling	2				
135. Enjoys bathing and caring routines	3				
136. ■ Takes everything to mouth (mouthing)	4	✓			
137. Shows annoyance when frustrated	5				
138. Plays clapping or waves 'bye-bye'	6				
139. Explores objects in immediate surroundings	7	✓			
140. Imitates everyday activities	8				
141. Rebellious behaviour	9				
142. Plays with other children but will not share toys	10				
Ⓞ Shares toys	11		✓		
Ⓞ Shows concern for siblings and playmates	12				
145. Actively helps siblings and playmates	13				
146. Chooses best friends	14				
<b>Play</b>					
147. ■ Shakes rattle	1	✓			
148. ■ Finds toy that is partially, but not wholly, hidden	2				
149. ■ Quickly finds hidden toy	3				
Ⓞ Explores properties and possibilities of toys and other objects with interest	4				
151. Plays contentedly alone or near familiar person	5				
Ⓞ Plays skillfully	6	✓			
153. ■ Kicks a small ball	7				
154. ■ Throws small ball over-arm	8			✓	
Ⓞ Takes turns in play	9				
Ⓞ Engages in cooperative and imaginative play, observing rules	10				
<b>INTERACTIVE SOCIAL SKILLS SCORE</b>		5	13	19	

Screening Dates		1	2	3	4
<b>SELF-CARE SOCIAL SKILLS</b>					
<b>Feeding</b>					
157. Puts hand up to bottle when feeding	1				
158. Grabs spoon	2	✓			
159. Holds, bites and chews finger food	3				
160. Drinks from a feeder cup with assistance	4				
161. Holds spoon but does not feed	5				
162. Holds spoon and brings it to mouth but cannot prevent it turning over	6				
163. Holds cup with both hands and drinks without too much spilling	7				
164. Holds spoon and gets food safely to mouth	8	✓			
165. Lifts cup with one hand, drinks and replaces it	9				
166. Eats skillfully with spoon	10				
167. Eats skillfully with fork and spoon	11			✓	
168. Eats with fork and knife or hands/chopsticks (with a little help only)	12				
169. Copes with entire meal unaided	13				
<b>Toileting and Dressing Skills</b>					
170. Indicates wet or soiled pants by crying or wriggling	1				
171. Anticipates toilet needs by restlessness or vocalization	2				
172. Dry during the day	3				
173. Vocalization and/or attends toilet needs in reasonable time	4		✓		
174. Usually dry at nights	5				
175. Washes hands	6				
176. Washes and dries hands, and attempts to brush teeth	7				
177. Washes and dries face and hands completely	8				
178. Dresses and undresses alone, excluding fastenings	9				
179. Dresses and undresses alone, including bottoms and fastenings	10				
<b>SELF-CARE SOCIAL SKILLS SCORE</b>		2	8	15	
<b>COGNITIVE SKILLS SCORE</b>		1			

**KEY**

- Stimulus material needed for this item.
- Ⓞ This item contains a cognitive element.
- Q Use when quality of performance is questioned. Still score item.



**GL  
Assessment**

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TW8 9AG.

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or no head lag’) was ticked. He was then held in a sitting position and as he had a straight back, the health visitor ticked Item 9 (‘Back straight’). The total score for the Passive postural skills area is calculated by adding the individual scores in each of the constituent skill sets. In Paul’s case, the total was eight (2 + 2 + 2 + 2) and this figure was entered in the box at the base of the last column, opposite the words ‘Passive postural skills’ score.

## **Active postural skills**

This area screens the locomotor activities that the child actively makes alone, without intervention of the examiner. Paul was observed in the prone position first, and actively looked around with his chest and shoulders supported upon extended arms. He did not get into a crawling position, and so the most advanced item in this skill set was Item 13 (‘Supports weight on flattened palms and extended arms’), which was therefore ticked in the first column. Once in a sitting position, Paul could remain there happily for a long time (Item 16: ‘Sits alone for prolonged periods’) but he had to be helped to get into position. He was therefore considered to have failed Item 17 (‘Gets into sitting position from either prone or supine’). He was finally held standing and was able to take some, but not all, of his weight on his feet (Item 18: ‘Held standing, bears some weight on feet’). The total score for ‘Active postural skills’ was seven (4 + 2 + 1).

## **Locomotor skills**

As the ‘Passive’ and ‘Active postural’ skill areas had been completed, and Paul had not scored the maximum in the latter, it was not necessary to check through the ‘Locomotor’ skills area, which starts at a developmental age of nine months.

## **Manipulative skills**

The ‘Manipulative skills’ area starts with observation of hands, usually by offering the children an object such as a one-inch brick. In this case, Paul took the first brick in a palmar grasp (Item 45: ‘Palmar grasp’) and

successfully passed it to the other hand (Item 46: 'Passes toy from one hand to another'). When offered a second brick, he took it in the other hand without dropping the first one and brought the two hands together to look at both bricks (Item 47: 'Holds two cubes – one in each hand, bringing them together'). Next, Paul was next offered a small object – in this case, a raisin – but could not pick it up, even with an immature grasp (Item 48: 'Inferior pincer grasp'). He did not use any of the more advanced skills described in this skill set and thus the maximum reached was Item 47. Paul was not able to build with bricks or draw, and so the total score for 'Manipulative skills' was the six he scored on 'Hand skills'.

## Visual skills

The first skill set in the 'Visual skills' area is entitled 'Visual Function', and examines the *functional response* to visual stimuli. This should not be confused with the formal testing of visual *acuity*, which may be carried out separately as part of a district screening programme (see Chapter 4 of the Reference Manual for further details of vision screening). In a very young child (of less than three months old), reaction to a torch light should be observed, but over this age it is reasonable to start by seeing if the child fixates on a face or dangling object. If the child does not do this, then the previous item (Item 71: 'Briefly fixates on pom-pom at 30 cm') is administered. The bead on a string can be used to go through Items 72 ('Follows dangling object through 90°'), 73 ('Follows dangling object through 180°') and 74 ('Converges eyes on approaching object').

For Item 75 ('Finger points accurately at small object'), a paper pellet, raisin or bead on a string is offered in the palm of the hand or on the table top. In practice, this item is carried out simultaneously with Items 48 and 49 (described above in the 'Manipulative skills' area). Paul successfully pointed to the small object, and so Item 75 was ticked.

The 'Visual Comprehension' skill set assesses the cognitive aspect of vision (that is, the *interpretation* of intact visual function) by observing the child's response to visual stimuli. Paul looked at the pom-pom when it was dropped, (Item 76: 'Watches falling toy, but does not look for it on the ground') but did not look for it on the floor (Item 77: 'Looks toward the

correct place for fallen toy’). In the same manoeuvre the examiner should note whether the child actively tries to find the object (Item 78: ‘Searches for the lost toy’) if he or she sees it falling. Items 79 (‘Watches movements of people at distance or out of window with interest’) and 80 (‘Finger points to distant objects’) can be directly observed by the examiner or assessed by questioning the mother. Paul used none of these skills and the highest item he achieved (Item 76) was ticked. The total ‘Visual skills’ score was seven (6 + 1).

## **Hearing and language skills**

As in ‘Visual skills’, the first skill set in ‘Hearing and language skills’ is ‘Function’; it is not a substitute for a full hearing test, which should be carried out separately if required. At a functional level, Paul responded to auditory stimuli and looked round to a soft voice (Item 92: ‘Looks toward sound of parent’s voice’), which is the most advanced response in this skills set.

The ‘Comprehension of language’ skill set is also analogous to visual comprehension in that it too examines cognitive interpretation – this time of sounds. Paul turned towards nearby sounds (Item 93: ‘Turns head towards sound source’) and also listened attentively to a wide range of environmental noises (Item 94: ‘Is attentive to everyday sounds’). He did not understand the meaning of any spoken words, and thus could not be credited with any items beyond 94. His total ‘Hearing and language skills’ score was five (3 + 2).

## **Speech and language skills**

The first skill set in ‘Speech and language skills’ is ‘Vocalization’, and Paul vocalized well (Item 112: ‘Vocalizes when pleased’). He also laughed and chuckled (Item 113: ‘Laughs, chuckles and squeals in play’), but did not babble or imitate sounds.

‘Expressive language’ assesses the use of vocalization for communication, and Paul had not yet reached this stage. Thus the total ‘Speech and language skills’ score was derived from the ‘Vocalization’ section, which was three.

## **Interactive social skills**

‘Interactive social skills’ are concerned with the child’s social response to the stimuli in the environment, and the first skill set, entitled ‘Social Behaviour’, is mainly about reactions to people. According to his mother, Paul enjoyed being handled (Item 134: ‘Responds to friendly handling’) and being bathed (Item 135: ‘Enjoys bathing and caring routines’). When given objects he put them in his mouth (Item 136: ‘Takes everything to mouth’), but his mother reported that he did not become upset when toys were removed or when he was otherwise frustrated (Item 137: ‘Shows annoyance when frustrated’). He did not clap or wave his hands (Item 138: ‘Plays clapping or waves ‘bye-bye’), nor was he interested in the external events of his immediate environment (Item 139: ‘Explores objects in immediate surroundings’). Item 136 was therefore the most advanced item that Paul completed.

In the ‘Play’ skill set he took a rattle and shook it (Item 147: ‘Shakes rattle’), but did not find a toy that had been partially hidden or perform subsequent skills. The total score for ‘Interactive social skills’ was therefore five (4 + 1).

## **Self-care social skills**

‘Self-care social skills’ examines self-help abilities. The first skill set covers ‘Feeding’. Paul put his hand up to his bottle (Item 157: ‘Puts hand up to bottle when feeding’) and to the spoon when he was being fed (Item 158: ‘Grabs spoon’). As Paul could not finger feed, or hold a spoon or cup, Item 158 was his most advanced response. The second skill set is ‘Toileting and Dressing’. Paul still wore a nappy, and had no awareness of wetting/soiling. Therefore he did not score on this set and his total score for ‘Self-care social skills’ was two.

Most of the items in the *Schedule of Growing Skills II* measure functional skills but some also have a cognitive component. Item numbers for these are circled in the relevant sections of the proforma. They are scored in the same way as the other items and contribute to the total score in that field. However, they can also be scanned as a group and if they are performed

disproportionately poorly compared with other items, the possibility of cognitive impairment should be considered. In Paul’s case the Cognitive section was completed on the first screen at age 8 months only because the Cognitive area only needs to be scored if it is a cause for concern.

## **Completing Paul’s Profile**

Paul’s scores were then transferred onto a Profile Form, generating the developmental ages shown in Table 1.1.

**Table 1.1: Case study of Paul: area scores converted to developmental age**

<b>Field</b>	<b>Score</b>	<b>Developmental Age (months)</b>
Passive postural skills	8	6
Active postural skills	7	8
Locomotor skills	not tested	not tested
Manipulative skills	6	8
Visual skills	7	6
Hearing and language skills	5	8
Speech and language skills	3	6
Interactive social skills	5	6
Self-care social skills	2	8
Cognitive	1	6

The resulting Profile compares Paul's developmental age within each skill area against his chronological age, highlighting strengths and weaknesses as well as areas of developmental delay. The significance of such delays, and the whole area of interpretation, are dealt with below.

As we mentioned at the beginning of this worked example, Paul was screened three times before he reached the age of five years. The Profiles generated by each screening demonstrate how clearly *SGS* displays the progress Paul made within each skill area over time, enabling practitioners to judge the normality, or otherwise, of the rate of his development. Detailed information about progress in specific skill sets is shown by the serial distribution of the ticked items in the columns on the score sheet. This documentation is extremely valuable if a child is found to be delayed and the developmental pattern has to be clarified. Thus, *SGS* is an objective supplement to the history of developmental milestones obtained directly from the parent in the child's *PCHR*. In Paul's case the ticks show a steady advance in each successive column.

Figure 1.7: Case study of Paul: the completed Profile Form at eight months

SCHEDULE OF GROWING SKILLS II										GL Assessment	
Profile Form											
Child's name: (Surname) <u>BENNETT</u> (Forenames) <u>PAUL JOHN</u>					Examined by: <u>JANE THOMPSON</u>						
Address: <u>41 DRAYTON CLOSE</u> <u>SHEFFIELD</u>					Title: <u>HEALTH VISITOR</u>						
Date of Birth: <u>28 MAR 93</u> Age: <u>8 MONTHS</u>					On: <u>30</u> / <u>11</u> / <u>93</u> Day Month Year						
Case/NHS no. <u>G.F.J.K.S.123</u>					At: (name of clinic) <u>REDGATE</u>						
					Signature: <u>J. Thompson</u>						
I recommend the following action:											
a) To be seen in <input type="checkbox"/> months for recall					b) Referral to:						
<input checked="" type="checkbox"/> months for next routine examination											
Skill Areas											
Age (months)	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social	Cognitive	Age (months)
60 mths			20 19	28 27	20	21 20	22 21	24	23 22 21	34 33 32	60 mths
48 mths			18 17	26 25 24	19	19 18	20 19	23	20 19 18	31 30 29 28	48 mths
36 mths			16 15	23 22 21	18 17	17 16	18 17	22 21 20	17 16	27 26 25 24	36 mths
30 mths			14 13	20 19 18	16	15 14	16 15	19 18	15 14	23 22 21 20	30 mths
24 mths			12 11 10	17 16 15	15 14	13 12	14 13 12	17 16	14 13 12 11	19 18 17 16	24 mths
18 mths			9 8 7	14 13 12	13	11 10	11	15 14	10 9 8	15 14 13 12	18 mths
15 mths			6 5	11 10	12	9	10 9 8	13 12 11	7 6	11 10 9	15 mths
12 mths		12	4 3	9 8	11 10	8 7	7 6	10 9 8	5 4	8 7 6	12 mths
10 mths		11	2	7	9	6	5	7	3	5 4	10 mths
8 mths		3 2		5 4	8	5 4	4	6	2 1	3 2	8 mths
6 mths	4 3 2	6 5 4		5 4	5 4	4 3	3 2	5 4	1	1	6 mths
3 mths	4 3	3		3 2	5 4	2	2	3 2			3 mths
1 mth	3 2 1	2		1	3 2		1	1			1 mth
0 mths		1			1	1					0 mths
Skill areas	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social	Cognitive	
*Quality											

\*Use a "Q" to indicate concern over quality of performance

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Figure 1.8: Case study of Paul: the completed Profile Form at 16 months

SCHEDULE OF GROWING SKILLS II										GL Assessment	
Profile Form											
Child's name: (Surname) <u>BENNETT</u>					Examined by: <u>JANE THOMPSON</u>						
(Forenames) <u>PAUL JOHN</u>					Title: <u>HEALTH VISITOR</u>						
Address: <u>41 DRAVON CLOSE</u>					On: <u>28</u> / <u>7</u> / <u>94</u>						
<u>SHEFFIELD</u>					Day Month Year						
Date of Birth: <u>28 MAR 93</u> Age: <u>16 MONTHS</u>					At: (name of clinic) <u>REDGATE</u>						
Case/NHS no. <u>CFJKS123</u>					Signature: <u>J. THOMPSON</u>						
I recommend the following action:											
a) To be seen in <input type="checkbox"/> months for recall					b) Referral to:						
<input checked="" type="checkbox"/> 20 months for next routine examination											
Skill Areas											
Age (months)	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social	Cognitive	Age (months)
60 mths			20 19	28 27	20	21 20	22 21	24	23 22 21	34 33 32	60 mths
48 mths			18 17	26 25 24	19	19 18	20 19	23	20 19 18	31 30 29 28	48 mths
36 mths			16 15	23 22 21	18 17	17 16	18 17	22 21 20	17 16	27 26 25 24	36 mths
30 mths			14 13	20 19 18	16	15 14	16 15	19 18	15 14	23 22 21 20	30 mths
24 mths			12 11 10	17 16 15	15 14	13 12	14 13 12	17 16	13 12 11	19 18 17 16	24 mths
18 mths			9 8 7	14 13 12	/	11 10	11	15 14	/	15 14 13 12	18 mths
15 mths			/	/	11 10	/	10 9 8	12 11 10	7 6	11 10 9	15 mths
12 mths		12	4 3	9 8	11 10	8 7	/	10 9 8	5 4	9 8 6	12 mths
10 mths		11 10	2 1	7	9	6	5	7	3	6 4	10 mths
8 mths		/	/	6	8	5	4	6	2	3 2	8 mths
6 mths	6 5 4 3 2 1	6 5 4		5 4	7 6	4 3	3	5 4	1	1	6 mths
3 mths	6 5 4 3 2 1	3		3 2	5 4	2	2	3 2			3 mths
1 mth	3 2 1	2		1	3 2			1 1			1 mth
0 mths		1			1	1					0 mths
Skill areas	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social	Cognitive	
*Quality											

\*Use a "Q" to indicate concern over quality of performance

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Figure 1.9: Case study of Paul: the completed Profile Form at 36 months

## SCHEDULE OF GROWING SKILLS II

### Profile Form

Child's name: (Surname) BENNETT Examined by: JANE THOMPSON  
 (Forenames) PAUL JOHN Title: HEALTH VISITOR  
 Address: 41 DRAYTON CLOSE On: 2 / 4 / 96  
SHEFFIELD Day Month Year  
 Date of Birth: 28 MAR 93 Age: 36 MONTHS At: (name of clinic) REDGATE  
 Case/NHS no.: GFJKS123 Signature: S Thompson

I recommend the following action:  
 a) To be seen in  months for recall  
 months for next routine examination  
 b) Referral to:

Age (months)	Skill Areas									Age (months)	
	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social		Cognitive
60 mths			20 19	28 27	20	21 20	22 21	24	23 22 21	34 33 32	60 mths
48 mths			18 17	26 25 24	19	19 18	20 19	23	20 19 18	31 30 29 28	48 mths
36 mths			16 15	23 22 21	19 17	17 16	18 17	22 21 20	17 16	27 26 24	36 mths
30 mths			14 13	20 19 18	16	15 14	16 15	19 18	15 14	23 22 21 20	30 mths
24 mths			12 11 10	17 16 15	15 14	13 12	14 13 12	17 16	13 11	19 18 17 16	24 mths
18 mths			9 8 7	14 13 12	13	11 10	11	15 14	10 9 8	15 14 13 12	18 mths
15 mths			6 5	11 10	12	9	10 9 8	13 12 11	7 6	11 10 9	15 mths
12 mths		12	4 3	9 8	11 10	8 7	7 6	10 9 8	5 4	8 7 6	12 mths
10 mths		11 10	2 1	7	9	6	5	7	3	5 4	10 mths
8 mths		9 8 7		6	8	5	4	6	2	3 2	8 mths
6 mths		7 6 5		5 4	7 6	4 3	3	5 4	1	1	6 mths
3 mths		3		3 2	5 4	2	2	3 2			3 mths
1 mth		2		1	3 2		1	1			1 mth
0 mths		1			1	1					0 mths

*CA's 36mths* (written vertically on the left side of the table)

Skill areas	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social	Cognitive
*Quality			Q							

\*Use a "Q" to indicate concern over quality of performance

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## Interpretation

During the development of the *Schedule of Growing Skills*, we have heard many different opinions about how the results of screening should be interpreted. Two seemingly contradictory views of interpretation emerge, and can be summarized as follows:

1. *Some practitioners believe that an instrument such as the Schedule of Growing Skills should give clear unequivocal guidelines about how results should be interpreted, what constitutes delay or defect and who should be referred. Screening is undertaken day in, day out by a wide range of practitioners, and such an approach to interpretation would ensure consistency of practice and control over the outcomes of screening. Yet many feel that such an approach to interpretation would reduce screening to a mechanical process when, in the context of child health promotion/surveillance, it ought, by its very nature, to be sensitive to the needs and characteristics of the individual child.*
2. *An equally strongly-held view is that all decision making must be based principally on the clinical judgement of the practitioner involved, since he or she knows the child's individual circumstances far more intimately than a policy-making managerial committee: the result of a screening test serves only as an additional tool. The advantages (sensitivity) and disadvantages (inconsistency, lack of control) of this approach to interpretation are the reverse of those mentioned in the previous paragraph.*

In designing the *Schedule of Growing Skills*, one of our main aims has been to produce an instrument which provides guidelines for interpretation, yet remains flexible enough to allow for clinical judgement. Indeed, it is our view that *both* these elements are necessary if screening is to be a reliable, valid process, consistently applied throughout an area, yet sensitive to local conditions and individual child needs.

One of the problems in providing guidelines for interpretation is that there is no consensus of opinion concerning the definitions of developmental 'delay' or 'abnormality' – despite the fact that some conclusions can be drawn from epidemiological studies. However, users of the *Schedule of*

*Growing Skills* are provided with a very simple visual method for determining, from the Profile Form, whether or not a child should be referred for further assessment. Once the Profile Form has been filled in (see page 10), the horizontal pattern of blocks (corresponding to the child’s developmental age within each skill area) is compared with the line drawn across the sheet (corresponding to the child’s chronological age). If the developmental age is within one age interval, the discrepancy is probably not important. However, if the developmental age is more than one age interval below the child’s chronological age, the discrepancy probably is significant. Referral should be considered, in the light of the practitioner’s clinical judgement and knowledge of local conditions. The rationale for this approach is that the age progression on the Profile Form is in increasingly greater intervals with advancing age, so the *percentage* discrepancy represented by these intervals remains similar. This method of interpretation is consistent with the arguments put forward by Drillien (1977) and Barber *et al.* (1976) (see pages 14 and 15 of the Reference Manual).

We would stress that this approach should *not* be used as an automatic cut-off point for mandatory referral, but as a warning signal that something may be wrong. The professional will then take account of his/her detailed knowledge of other factors, including genetic predisposition, prematurity, family structure, educational background, social interaction, play opportunities and medical conditions.

All these factors must be taken into account when considering the correct action that should be taken when developmental delay is identified. We emphasized earlier that standards must not be lowered just because a child comes from a less demanding or less ambitious background. If the delay meets the agreed criteria for ‘significance’ then the action policy agreed for the district must be followed. For any action to be effective, however, the parents must be fully involved in the decision process, and they must also agree to carry out whatever action is recommended. On occasions, the experienced examiner will know that the child’s parents are unlikely to understand or cooperate with such a decision. Under such rare circumstances, it may be better to defer the proposed action and review the child’s progress after a short interval. If the only result of diagnosis of

developmental delay would be to generate parental anxiety, anger or guilt and not to initiate action that would be beneficial to the child, then discretion may be the better part of valour! However, even in these circumstances it would be appropriate to document and express your anxiety to the parents.

The Record and Profile Forms have been designed with this approach to interpretation in mind. The numerical and visual recording of results will ensure that they are presented consistently and in an easy-to-understand format. However, they cannot tell the whole story about an individual child's developmental status, nor can they give full expression to a trained practitioner's perceptions of that child's performance. Therefore, we have left room on both the forms for practitioners to record qualitative opinions and judgements, which will bring to life the information contained in the Profile and Record Forms. We have also provided a means of indicating doubts about the quality of a child's performance.

## **Interpretation of the Cognitive Dimension**

It will be noticed that the highlighted 'Cognitive skill' section does not include any items in the 'Hearing and language' or 'Speech and language' fields. This seems anomalous, as the acquisition of language skills depends strongly on cognitive ability. This was exactly the reason why these skills were not included. According to that argument, they should all have been used, which would have then weighted the cognitive section disproportionately towards language skills and not provided the extra dimension which we were looking for. This is illustrated in Case Study 2.

### **Case Study 2: Mary**

Figure 1.10 shows the Record Form for Mary who was seen at the age of 32 months for a developmental check. Her mother was worried that her speech seemed delayed. The health visitor wanted to assess her from that point of view, but she was also concerned that Mary had a more generalized developmental delay. Although she administered the items, in all relevant

skill areas, she decided to look specifically at the ‘Cognitive skills’ dimension. Therefore, she administered all the relevant items and ticked them off up to the ceiling item that Mary could perform. Hence there are a series of ticks in the ‘Manipulative skills’ and ‘Visual skills’ subfields. In ‘Interactive social skills’ Mary’s ceiling was Item 141 (Rebellious behaviour), so she could not perform any of the circled cognitive items in that subfield.

The health visitor transferred the scores to the Profile Form (see Figure 1.11 on page 34) in the usual way to show the developmental age equivalents in the seven subfields of ‘Locomotor’, ‘Manipulative’, ‘Visual’, ‘Hearing and language’, ‘Speech and language’, ‘Interactive social’ and ‘Self-care social’ skills. In the fields of ‘Locomotor’ and ‘Self-care social’ skills she scored at a 30 month level. This is clearly normal as it corresponds to her chronological age line drawn through the 30 month level. In the fields of ‘Visual’ and ‘Manipulative’ skills, she was at a 24 month level. This is one age interval below the chronological age level of 30 months and so does not indicate significant abnormality. On their own, these discrepancies could be interpreted as indicating a need for a review by administering the *Schedule of Growing Skills* again in approximately six months. However, Mary’s developmental performance in ‘Hearing and Language’, ‘Speech and Language’ and ‘Interactive social’ skills were at an 18 month level, which is two intervals below her chronological age, thus suggesting a significant delay. On the basis of these results, assessment by a speech and language therapist should be offered. This should probably be preceded by a hearing test, unless one has recently been performed.

The combination of these significant delays with the questionable delay in two other fields, raises the possibility of more generalized developmental problems. This is confirmed by the ‘Cognitive skills’ subfield in which Mary performed at the 18 month level. This is more than one age level below her chronological age and is therefore very suggestive of a significant delay. This finding makes it unlikely that Mary has a specific language impairment and referral should also be made to a paediatrician and possibly a psychologist. A child development team which can perform multi-disciplinary assessment is often the best resource to use in these circumstances.

Figure 1.10: Record Form for Mary (page 2)

*The Schedule of Growing Skills II – Record Form*

Screening Dates				
<b>PASSIVE POSTURAL SKILLS</b>				
<b>Supine Position</b>				
1. Head in midline	1			
2. Lifts legs into vertical position and grasps foot (foot regard)	2			
<b>Ventral Suspension</b>				
3. Head in line with body, hips semi-extended	1			
4. Head above line of body, hips and shoulders extended	2			
<b>Pull to Sit</b>				
5. Head lag on pulling, when body vertical; head held momentarily erect before falling forwards	1			
6. Little or no head lag	2			
7. Braces shoulders and pulls self up	3			
<b>Sitting Position (supported by adult)</b>				
8. Back curved	1			
9. Back straight	2			
<b>PASSIVE POSTURAL SKILLS SCORE</b>				
<b>ACTIVE POSTURAL SKILLS</b>				
<b>Prone Position</b>				
10. Head sideways, resting on cheeks, buttocks high with knees flexed under abdomen, arms close to chest with elbows flexed	1			
11. Lifts head momentarily, buttocks high	2			
12. Holds up head and upper chest on forearms, with buttocks flat	3			
13. Supports weight on flattened palms and extended arms	4			
14. Gets into crawling position	5			
<b>Sitting Position (unsupported)</b>				
15. Sits alone momentarily without support	1			
16. Sits alone for prolonged periods (at least to the count of 10)	2			
17. Gets into sitting position from either prone or supine	3			
<b>Standing</b>				
18. Held standing, bears some weight on feet	1			
19. Held standing, takes full weight on feet	2			
20. Stands holding on	3			
21. Pulls self to stand	4			
<b>ACTIVE POSTURAL SKILLS SCORE</b>				

Screening Dates				
<b>LOCOMOTOR SKILLS</b>				
<b>Movement and Balance</b>				
22. Rolls and squirms to move about	1			
23. Attempts to crawl, creep or shuffle	2			
24. Walks with hands held, taking full weight on feet	3			
25. Walks around furniture (or pushing wheeled toy)	4			
26. Walks alone, feet wide apart, arms up for balance	5			
27. Walks well, feet only slightly apart, can turn corners and stop suddenly	6			
28. Picks up objects from floor without falling	7			
29. Runs confidently, stopping and starting with care and avoiding obstacles	8			
30. Jumps taking both feet off the ground	9			
31. Walks tiptoe	10			✓
32. Runs tiptoe	11			
33. Hops on one foot for 3 steps	12			
34. Heel-to-toe walking forwards (for a minimum of 4 steps)	13			
35. Stands on each foot separately for a count of 8 seconds	14			
<b>Stairs</b>				
36. Crawls upstairs	1			
37. Walks upstairs with hand held, two feet to a step	2			
38. Walks up and down stairs confidently, two feet to a step	3			✓
39. Walks alone upstairs (with alternating feet) and downstairs (two feet to a step)	4			
40. Walks alone upstairs and downstairs – one foot per step (adult fashion)	5			
41. Runs upstairs	6			
<b>LOCOMOTOR SKILLS SCORE</b>		13		
<b>MANIPULATIVE SKILLS</b>				
<b>Hand Skills</b>				
42. Hands closed and thumb turned in	1			
43. Hand regard and finger play	2			
44. Clasp hands and presses palms together	3			
45. ■ Palmar grasp	4			
46. ■ Passes toy from one hand to another	5			
47. ■ Holds two cubes – one in each hand, bringing them together	6			
48. ■ Inferior pincer grasp	7			
49. ■ Neat pincer grasp	8			
50. ■ Throws toys to the floor deliberately (casting)	9			
51. ■ Turns pages of a book, several at a time	10			
52. ■ Turns pages of a book, one at a time	11			
53. ■ Puts 10 pegs into the cup in 30 seconds	12			✓
54. ■ Puts 8 pegs into the pegboard in 30 seconds	13			

KEY	
■	Stimulus material needed for this item.
Ⓞ	This item contains a cognitive element.
Q	Use when quality of performance is questioned. Still score item.

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Figure 1.10: continued (page 3)

The Schedule of Growing Skills II – Record Form

Screening Dates				
<b>MANIPULATIVE SKILLS (CONT)</b>				
<b>Bricks</b>				
55	■ Tower of 2 bricks	1	✓	
56	■ Tower of 3 bricks	2	✓	
57	■ Tower of 4 to 6 bricks	3	✓	
58	■ Tower of 7+ bricks	4		
59	■ Imitates bridge	5		
60	■ Builds 3 steps with 6 bricks after demonstration	6		
<b>Drawing</b>				
61	■ To and fro scribbles	1	✓	
62	■ Circular scribbles	2	✓	
63	■ Imitates vertical and/or horizontal line	3		
64	■ Imitates circle	4		
65	■ Imitates cross	5		
66	■ Imitates square	6		
<b>Draw-a-Person Test</b>				
67	■ Child draws head and one other part	1		
68	■ Child draws head, legs and arms (two)	2		
69	■ Child draws face, trunk, legs, arms	3		
<b>MANIPULATIVE SKILLS SCORE</b>		17		
<b>VISUAL SKILLS</b>				
<b>Visual Function</b>				
70	■ Turns towards diffuse light	1		
71	■ Briefly fixates on pom-pom at 30cm	2		
72	■ Follows dangling object through 90°	3		
73	■ Follows dangling object through 180°	4		
74	■ Converges eyes on approaching object	5		
75	■ Finger points accurately at small object	6	✓	
<b>Visual Comprehension</b>				
76	■ Watches falling toy, but does not look for it on the ground (no object permanence)	1	✓	
77	■ Looks toward the correct place for fallen toy (object permanence)	2	✓	
78	■ Searches for the lost toy	3	✓	
79	■ Watches movements for people at distance or out of window with interest	4	✓	
80	■ Finger points to distant objects	5	✓	
81	■ Shows interest in pictures	6	✓	
82	■ Recognizes details of Picture Book	7	✓	
83	■ Completes shape formboard	8	✓	
84	■ Completes fish formboard	9	✓	
85	■ Recognizes minute details of the picture	10	✓	
86	■ Matches 2 colours	11		
87	■ Matches 4 colours	12		
88	■ Matches all 10 colour cards	13		
89	■ Cooperates with linear chart vision test (6 metres)	14		
<b>VISUAL SKILLS SCORE</b>		14		

Screening Dates				
<b>HEARING AND LANGUAGE SKILLS</b>				
<b>Hearing Function</b>				
90	■ Startled by sudden noise	1		
91	■ Responds to voice	2		
92	■ Looks toward sound of parent’s voice	3		
<b>Comprehension of Language</b>				
93	■ Turns head towards sound source	1		
94	■ Is attentive to everyday sounds	2		
95	■ Understands ‘no’/‘bye-bye’	3	✓	
96	■ Recognizes own name	4		
97	■ Shows understanding of names of familiar objects or people	5		
98	■ Can select 2 out of 4 objects	6		
99	■ Can point to 2 named body parts (e.g. nose and hands)	7	✓	
100	■ Can point to doll’s body parts (e.g. eyes and tummy)	8		
101	■ Follows a two-step command	9		
102	■ Shows understanding of verbs, using action pictures	10		
103	■ Shows understanding of functions of objects, using pictures	11		
104	■ Shows understanding of prepositions	12		
105	■ Shows understanding of size adjectives	13		
106	■ Shows understanding of negatives	14		
107	■ Follows a command with two instructions	15		
108	■ Understands complicated questions	16		
109	■ Follows a command with three instructions	17		
110	■ Understands negatives in complex sentence statements	18		
<b>HEARING AND LANGUAGE SKILLS SCORE</b>		10		
<b>SPEECH AND LANGUAGE SKILLS</b>				
<b>Vocalization</b>				
111	■ Makes occasional grunting sounds	1		
112	■ Vocalizes when pleased	2		
113	■ Laughs, chuckles and squeals in play	3		
114	■ Babbles continually and tunelessly	4		
115	■ Imitates adults, playful sounds (coughs, ‘brrr’, smacks lips)	5	✓	
<b>Expressive Language</b>				
116	■ Uses inessential jargon containing vowels and many consonants	1		
117	■ Uses one word with meaning	2		
118	■ Communicates by mixed gesture and vocalization	3		
119	■ Uses several words with meaning (at least 4)	4		
120	■ Uses more than 7 words with meaning	5		
121	■ Attempts to repeat words when used by others	6	✓	

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Figure 1.10: continued (page 4)

Screening Dates				
<b>SPEECH AND LANGUAGE SKILLS (CONT)</b>				
122. Puts 2 or more words together to form simple sentences	7			
123. Names familiar objects and pictures	8			
124. Speech usually understood by mother	9			
125. Uses question words (e.g. what, where?) and uses 2 personal pronouns (e.g. me, you)	10			
126. Able to carry on simple conversations and describe events	11			
127. Knows several nursery rhymes or pop songs or commercials	12			
128. Can give fuzzy account of recent events	13			
129. Speech fluent and clear	14			
130. ■ Can produce a sentence of 5 or more words	15			
131. ■ Can describe a sequence of events	16			
132. ■ Can give an explanation of events	17			
<b>SPEECH AND LANGUAGE SKILLS SCORE</b>		11		
<b>INTERACTIVE SOCIAL SKILLS</b>				
<b>Social Behaviour</b>				
133. Smiles	1			
134. Responds to friendly handling	2			
135. Enjoys bathing and caring routines	3			
136. ■ Takes everything to mouth (mouthing)	4			
137. Shows annoyance when frustrated	5			
138. Plays clapping or waves 'bye-bye'	6			
139. Explores objects in immediate surroundings	7			
140. Imitates everyday activities	8			
141. Rebellious behaviour	9	✓		
142. Plays with other children but will not share toys	10			
④ Shares toys	11			
④ Shows concern for siblings and playmates	12			
145. Actively helps siblings and playmates	13			
146. Chooses best friends	14			
<b>Play</b>				
147. ■ Shakes rattle	1			
148. ■ Finds toy that is partially, but not wholly, hidden	2			
149. ■ Quickly finds hidden toy	3			
④ ■ Explores properties and possibilities of toys and other objects with interest	4	✓		
151. Plays contentedly alone or near familiar person	5	✓		
④ Plays skillfully	6			
153. ■ Kicks a small ball	7			
154. ■ Throws small ball over-arm	8			
④ ■ Takes turns in play	9			
④ Engages in cooperative and imaginative play, observing rules	10			
<b>INTERACTIVE SOCIAL SKILLS SCORE</b>		14		

Screening Dates				
<b>SELF-CARE SOCIAL SKILLS</b>				
<b>Feeding</b>				
157. Puts hand up to bottle when feeding	1			
158. Grabs spoon	2			
159. Holds, bites and chews finger food	3			
160. Drinks from a feeder cup with assistance	4			
161. Holds spoon but does not feed	5			
162. Holds spoon and brings it to mouth but cannot prevent it turning over	6			
163. Holds cup with both hands and drinks without too much spilling	7			
164. Holds spoon and gets food safely to mouth	8			
165. Lifts cup with one hand, drinks and replaces it	9			
166. Eats skillfully with spoon	10	✓		
167. Eats skillfully with fork and spoon	11			
168. Eats with fork and knife or hands/chopsticks (with a little help only)	12			
169. Copes with entire meal unaided	13			
<b>Toileting and Dressing Skills</b>				
170. Indicates wet or soiled pants by crying or wriggling	1			
171. Anticipates toilet needs by restlessness or vocalization	2			
172. Dry during the day	3			
173. Vocalization and/or attends toilet needs in reasonable time	4	✓		
174. Usually dry at nights	5			
175. Washes hands	6			
176. Washes and dries hands, and attempts to brush teeth	7			
177. Washes and dries face and hands completely	8			
178. Dresses and undresses alone, excluding fastenings	9			
179. Dresses and undresses alone, including buttons and fastenings	10			
<b>SELF-CARE SOCIAL SKILLS SCORE</b>		14		
<b>COGNITIVE SKILLS SCORE</b>				
		14		

KEY	
■	Stimulus material needed for this item.
④	This item contains a cognitive element.
Q	Use when quality of performance is questioned. Skill score item.

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Figure 1.11: Worked example of Interpretation: Mary’s Profile Form

## SCHEDULE OF GROWING SKILLS II

GL Assessment

### Profile Form

Child's name: (Surname) JOHNSON ..... Examined by: SUZANNA SMITH .....  
 (Forenames) MARY ..... Title: HEALTH VISITOR .....  
 Address: 2 WESTERN TERRACE ..... On: 16 / 1 / 90 .....  
BRIGHTON, E. SUSSEX BN1 2DT ..... Day Month Year  
 Date of Birth: 13-5-87 ..... Age: 32 MONTHS ..... At: (name of clinic) CHILD'S HOME .....  
 Case/NHS no. 587-33 ..... Signature: Suzanna Smith .....  
 I recommend the following action:  
 a) To be seen in  6 months for recall  
 months for next routine examination  
 b) Referral to: 1. Audiologist  
2. speech therapist  
3. Paediatrician

Age (months)	Skill Areas										Age (months)	
	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social	Cognitive		
60 mths			20 19	28 27	20	21 20	22 21	24	23 22 21	34 33 32	60 mths	
48 mths			18 17	26 25 24	19	19 18	20 19	23	20 19 18	31 30 29 28	48 mths	
36 mths			16 15	23 22 21	18 17	17 16	18 17	22 21 20	17 16	27 26 25 24	36 mths	
24 mths			14 13	20 19 18	16	15 14	16 15	19 18	15 14	23 22 21 20	24 mths	
18 mths			9 8 7	14 13 12	13	11 10	11 10	14 13 12	10 9 8	15 14 13 12	18 mths	
15 mths			6 5	11 10	12	9	10 9 8	13 12 11	7 6	11 10 9	15 mths	
12 mths			12	4 3 8	9 10	11 10	8 7 6	7 6 5	10 9 8	5 4	8 7 6	12 mths
10 mths			11 10	2 1	7	9	6	5	7	3	5 4	10 mths
8 mths			8 7		6	8	5	4	6	2	3 2	8 mths
6 mths			6 5 4		5 4	7 6	4 3	3	5 4	1	1	6 mths
3 mths			3 2		3 2	5 4	2	2	3 2		3 mths	
1 mth			2		1	3		1	1		1 mth	
0 mths			1			1	1				0 mths	
Skill areas	Passive Posture	Active Posture	Locomotor	Manipulative	Visual	Hearing & Language	Speech & Language	Interactive Social	Self-Care Social	Cognitive		
*Quality												

\*Use a "Q" to indicate concern over quality of performance

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Code: 0090006038

## **Gestational age**

Sometimes it is said that an allowance should be made for prematurity by calculating corrected age from the expected date of maturity (40 weeks gestational age) instead of from the actual date of birth (chronological age). Clearly this can be important for infants who were significantly preterm, especially in the first year of life. We recommend that this should be done as simply as possible by making the adjustment at the interpretation stage, and not by altering the chronological age/development age figures on the Profile Form. If these ages are not changed, there is less scope for misunderstanding and any discrepancy between them can then be compared with the degree of prematurity as reflected by the gestational age before deciding upon the correct action. The exception to this is in the 'Motor Skills' section. For an example of how the corrected age should be used for assessing the achievement of motor milestones according to gestational age, see Chapter 4 of the Reference Manual.



# Administration Instructions

## Introduction

Developmental screening (developmental testing) is carried out by health visitors, nurses, or doctors working in primary health care. It is the part of child health surveillance that enables the initial detection of developmental disabilities (including children with hearing and visual impairment), learning difficulties and significant behavioural disorders. It is used because early intervention in the majority of instances gives better results and, for those children whose disability cannot be modified, appropriate counselling can be given to parents. Parents appreciate honest and early diagnosis, and counselling facilitates acceptance of any difficulties. Equally, when a child is found to be normal on screening, parents appreciate reassurance that there is nothing to worry about.

Developmental screening should be universal: every child has the right to a good surveillance programme and various tests can be performed by those involved in primary care. Ideally, if an abnormality is detected in screening it should be verified by further detailed testing and examination. The child's performance is observed and scored so that a developmental level can be established for all parameters of development. This in depth *quantitative* developmental examination is provided by the *Schedule of Growing Skills II (SGS II)*, and is performed by those working at first referral level. It can also be used as a primary screening test by health visitors, nurses or doctors (general practitioners or community paediatricians). If abnormality is detected, detailed developmental assessment should be carried out to enable a planned intervention. This is often done as part of the multidisciplinary assessment at a child development centre or children's centre.

*SGS II* is conducted by looking at various aspects of the child’s development and the performance is scored. If necessary, by comparing scores at subsequent review examinations the doctor, parents and others are able to monitor the child’s progress over a period of time.

Administration instructions for all the items are provided, and a mean and range age is stated for most skills in order to guide the practitioner.

All items with an encircled item number contain a cognitive element.

All items preceded by a ■ require the use of stimulus material.

# Gross Motor Function and Posture

## Passive Postural Skills

### Supine Position

- |    |   |   |
|----|---|---|
| 1. | Head in midline   | 1 |
| 2. | Lifts legs into vertical position and grasps foot (foot regard) | 2 |

### *Method*

Place the child face up on a firm, comfortable surface (i.e. in supine position).

### *Points to observe*

The child of 6 weeks onwards should keep head in midline without the head turning to one side consistently. Until 6 weeks, most newborn babies lie with their head turned to one side and may have an asymmetric tonic neck reflex. Children who consistently keep their head turned to one side may have an obligatory asymmetric tonic neck reflex. This is abnormal and usually an indication of a brain abnormality; it is also seen in children with spasticity. Children get into sitting position from supine by lifting their head and legs together at a mean age of 5 to 6 months. Foot regard is seen at a mean age of 6 months (range 5 to 8 months).

Figure 2.1: Illustration of head in midline (Item 1)



## Ventral Suspension

- |    |  |   |
|----|--|---|
| 3. | Head in line with body, hips semi-extended           | 1 |
| 4. | Head above line of body, hips and shoulders extended | 2 |

### *Method*

Hold the baby in mid-air with both hands in a prone position, taking care not to press on the chest.

### *Points to observe*

Hyperextension of the neck is due to extensor hypertonus and this can cause marked head retraction; such babies would have other features of spasticity (e.g. asymmetrical posture, or fisting beyond 6 months).

## Pull to Sit

- |    |  |   |
|----|--|---|
| 5. | Head lag on pulling, when body vertical; head held momentarily erect before falling forwards | 1 |
| 6. | Little or no head lag  | 2 |
| 7. | Braces shoulders and pulls self up   | 3 |

### *Method*

Lay the child on his/her back (supine), grasp both hands, and pull the child into sitting position.

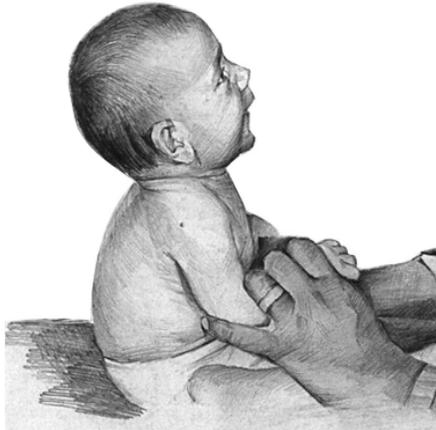
### *Points to observe*

If the child is unable to hold the head, the child is developmentally below 6 weeks, or has an abnormality such as hypotonia, a cerebral disorder (e.g. cerebral palsy, degeneration of the brain), weakness of muscles (as in myopathic disorders) or a nerve or nerve root problem (as in chronic spinal muscular atrophy). Factors such as sedation and intercurrent illness could also be a cause of hypotonia. If the child shows head lag, but on ventral suspension holds the head above the line of the body, this might suggest spasticity due to extensor spasm or hypertonicity, often seen in babies with cerebral palsy. The mean age at which a baby is able to hold the head is 6 weeks (range 1 to 2 months). The mean age for bracing the shoulders and pulling self up to sit is 3½ months (range 2 to 6 months).

**Figure 2.2:** Illustration of head lag on pulling (Item 5)



Figure 2.3: Illustration of little or no head lag (Item 6)



### Sitting Position (Supported by adult)

8.	Back curved	1
9.	Back straight	2

#### *Method*

Place the child on a level surface and support by holding his/her arms.

#### *Points to observe*

The baby should be able to keep a straight back by 7½ months (range 6 to 8½ months). Initial sitting position is by leaning forward, propped up by one or both hands; this occurs before the child is able to sit unsupported. The mean age for sitting with support is 6 months (range 5 to 8 months).

## Active Postural Skills

### Prone Position

- |   |   |
|---|---|
| 10. Head sideways, resting on cheeks, buttocks high with knees flexed under abdomen, arms close to chest with elbows flexed | 1 |
| 11. Lifts head momentarily, buttocks high   | 2 |
| 12. Holds up head and upper chest on forearms, with buttocks flat   | 3 |
| 13. Supports weight on flattened palms and extended arms  | 4 |
| 14. Gets into crawling position   | 5 |

### *Method*

Place the baby on the abdomen, face down (prone position). Encourage the baby to lift the head by gently stroking the back or speaking to him/her.

### *Points to observe*

Floppy babies will lie with their head sideways, resting on cheeks, and buttocks flat (frog position).

In Prone Position	Mean	Range
Lifts head momentarily	1 month	$\frac{1}{2}$ to 2 months
Lifts head to about 30°	2 months	1 to 3 months
Head and upper chest held up on forearms	3 months	2 to 5 months
Supports weight on flattened palms and extended arms	6 months	4 to 8 months
Gets into crawling position	8 months	6 to 12 months

## Sitting Position (Unsupported)

15.	Sits alone momentarily without support	1
16.	Sits alone for prolonged periods (at least to the count of 10)	2
17.	Gets into sitting position from either prone or supine	3

### *Method*

Sit the child on the floor or a couch. Do not support the child with hands, but take care not to let the child fall.

### *Points to observe*

When babies initially start to sit alone they sit propped up using both hands; and only then progress to sit without propping up. At this stage, they sit with both lower limbs flexed and abducted to ensure a stable sitting base. The mean age for sitting without support is 7 months (range 6 to 10 months); the mean age for getting to sitting position is 9 months (range 7 to 13 months).

**Figure 2.4:** Illustration of sitting alone momentarily without support (Item 15)



## Standing

18.	Held standing, bears some weight on feet	1
19.	Held standing, takes full weight on feet	2
20.	Stands holding on	3
21.	Pulls self to stand	4

### *Method*

Hold the child in a standing position, or observe free-standing if the child can stand without support.

### *Points to observe*

The child may be held gently under the arms or at the pelvis. Note that a child with an asymmetrical posture whilst standing or walking with a limp might have dislocation of the hip or some other motor problem, like cerebral palsy. Children with hemihypertrophy also have an asymmetrical posture.

	Mean	Range
Bears some weight	7 months	6 to 9 months
Takes full weight on feet	8 months	6 to 12 months
Stands holding on	9 months	7 to 14 months
Pulls self to stand	10 months	8 to 12 months
Stands alone	11 months	9 to 16 months

## Locomotor Skills

### Movement and Balance

22.	Rolls and squirms to move about	1
23.	Attempts to crawl, creep or shuffle	2
24.	Walks with hands held, taking full weight on feet	3
25.	Walks around furniture (or pushing wheeled toy)	4
26.	Walks alone, feet wide apart, arms up for balance	5
27.	Walks well, feet only slightly apart, can turn corners and stop suddenly	6
28.	Picks up objects from floor without falling	7
29.	Runs confidently, stopping and starting with care and avoiding obstacles	8
30.	Jumps taking both feet off the ground	9
31.	Walks tiptoe	10
32.	Runs tiptoe	11
33.	Hops on one foot for 3 steps	12
34.	Heel-to-toe walking forwards (for a minimum of 4 steps)	13
35.	Stands on each foot separately for a count of 8 seconds	14

### *Method*

Observe the child’s deliberate movements. A toy might be placed in front of the child to encourage active movement, such as rolling over, crawling or walking. A child who can stand may be taken by the hand to observe walking and then encouraged to walk independently. A child who can walk is observed walking, running, jumping, walking tiptoe, running on tiptoe, hopping, heel-to-toe walking, and so on.

### *Points to observe*

There is marked variation in motor development. Non-crawlers (shufflers, rollers and creepers) walk late (22 to 24 months).

**Figure 2.5:** Illustration of rolling and squirming to move about (Item 22)



**Figure 2.6:** Illustration of picking up objects from the floor without falling (Item 28)



<b>Crawlers (83%)</b>	<b>Mean</b>	<b>Range</b>
Gets to sitting position unaided	7½ months	4½ to 14 months
Crawls	8 months	5½ to 13½ months
Stands (holding on to furniture)	9½ months	5 to 15 months
Walks (10 paces unaided)	13½ months	9½ to 17½ months

<b>Shufflers (9%)</b>	<b>Mean</b>	<b>Range</b>
Sits	8½ months	4½ to 14 months
Gets to sitting position	11½ months	6 to 16 months
Shuffles	11½ months	6 to 18½ months
Stands (holding on to furniture)	13½ months	6½ to 18½ months
Walks (10 paces unaided)	17 months	7½ to 25 months

<b>Rollers (1%)</b>	<b>Mean</b>	<b>Range</b>
Sits	9¼ months	5 to 14 months
Gets to sitting position	11½ months	8 to 15 months
Rolls	8½ months	3 to 14 months
Crawls	13¾ months	8 to 17½ months
Stands (holding on to furniture)	14¾ months	9 to 21 months
Walks (10 paces unaided)	18¼ months	10 to 24 months

Creepers (1%)	Mean	Range
Sits	9 <sup>1</sup> / <sub>4</sub> months	5 to 14 <sup>1</sup> / <sub>2</sub> months
Gets to sitting position	12 months	6 to 19 <sup>1</sup> / <sub>2</sub> months
Creeps	11 months	6 to 19 months
Crawls	15 <sup>1</sup> / <sub>4</sub> months	10 to 20 months
Stands (holding on to furniture)	15 <sup>1</sup> / <sub>4</sub> months	8 to 24 months
Walks (10 paces unaided)	20 months	10 to 30 months

Gross motor development	Mean	Range
Rolls (or squirms) to make progress forwards or backwards	8 <sup>1</sup> / <sub>2</sub> months	6 to 11 months
Crawls (whilst crawling there must be coordinate movement of one arm and opposite leg synchronously)	9 <sup>1</sup> / <sub>2</sub> months	7 to 13 months
Walks with hand held	10 months	8 to 12 months
Walks round furniture	10 <sup>1</sup> / <sub>2</sub> months	8 to 13 months
Walks alone	13 months	11 to 18 months
Squats and picks up objects	14 <sup>1</sup> / <sub>2</sub> months	12 to 19 months
Runs	16 months	15 to 20 months
Jumps	18 months	–
Walks tiptoe	20 months	–
Runs tiptoe	24 months	–
Hops on one foot for 3 steps (each foot)	3 years	–

## Stairs

36.	Crawls upstairs	1
37.	Walks upstairs with hand held, two feet to a step	2
38.	Walks up and down stairs confidently, two feet to a step	3
39.	Walks alone upstairs (with alternating feet) and downstairs (two feet to a step)	4
40.	Walks alone upstairs and downstairs – one foot per step (adult fashion)	5
41.	Runs upstairs	6

### *Method*

Observe how the child uses stairs, or ask the parents to assess.

### *Points to observe*

Gross motor development – stairs	Mean	Range
Walks upstairs with help	16 months	12 to 24 months
Walks upstairs with both feet on each step	25 months	19 to 30 months
Walks upstairs, one foot per step, and downstairs, two feet per step	3 years	–
Walks upstairs, adult manner, one foot per step	3½ years	–
Walks upstairs and downstairs, adult manner	4 years	–
Runs upstairs	4½ years	–

# Fine Motor Function

## Manipulative Skills

### Hand Skills

42.	Hands closed and thumb turned in	1
43.	Hand regard and finger play	2
44.	Clasps hands and presses palms together	3

### *Method*

Observe the hands, particularly the thumb, and watch what the child is doing with the hands, for example, observe for hand regard.

### *Points to observe*

It is abnormal, particularly beyond 6 weeks, for either hand to be persistently fistled, and this may suggest central nervous system (CNS) abnormality. As a group, children with cerebral palsy or degenerative disorders tend to fist excessively. Hand regard refers to the child fixating on the hands, and finger play refers to the fingers of both hands coming into contact with each other at midline position. Normal hand regard appears at a mean age of 3 months (range 1 to 4 months), and finger play usually occurs about 1 month after hand regard. Hand regard should disappear by 5 months; persistence or reappearance after 5 months is abnormal, indicative of CNS abnormality and may be seen in children with delayed development.

45.	■	Palmar grasp	4
46.	■	Passes toy from one hand to another	5
47.	■	Holds two cubes – one in each hand, bringing them together	6

### *Method*

Observe the grasp by placing a one-inch brick in front of the child and encouraging the child to take it by saying, ‘Pick it up’. Once the child has picked up one brick, give another brick and encourage the child to bring them together (the examiner may demonstrate).

### *Points to observe*

Palmar grasp is usually by radial approach; that is, the object is grasped with the thumb and several fingers. The mean age for this is 5 months (range 3 to 6 months). Transferring from one hand to the other is seen at a mean age of 6 months (range 4½ to 7½ months). The child should hold both bricks without dropping, for at least 3 seconds. The mean age for this is 6 months (range 5 to 7 months).

48.	■	Inferior pincer grasp	7
49.	■	Neat pincer grasp	8

### *Method*

Place a smartie, raisin or a screwed up piece of paper (size 1½ cm) in front of the child, or use the bead on the string, and encourage the child to pick it up. Observe the grasp. This is also an opportunity to discuss accident prevention, such as swallowing small objects.

### *Points to observe*

Inferior pincer grasp (mean 9 months, range 8 to 11 months) refers to the child grasping a small object between the tip of the fingers and the thumb (the fingers and thumb need not be in complete opposition, as in the neat

pincer grasp, where the index finger and the thumb should be in complete opposition). The mean age for neat pincer grasp is 10½ months (range 10 to 12 months).

- |     |   |   |   |
|-----|---|---|---|
| 50. | ■ | Throws toys to the floor deliberately (casting) | 9 |
|-----|---|---|---|

### *Method*

Give the child 3 bricks, one after the other.

### *Points to observe*

The child should consistently and deliberately throw the bricks. Throwing a toy or brick deliberately is known as casting; it is normal at 12 to 15 months but should disappear by 18 months. Persistence beyond 18 months is abnormal, and may suggest developmental delay, a learning disability or a behavioural disorder, such as autistic features or autism. Non-appearance by 12 to 15 months is also abnormal, and indicates that the child has not reached the expected developmental level for 12 months in this skill. Children with significant visual impairment do not cast.

- |     |   |  |    |
|-----|---|--|----|
| 51. | ■ | Turns pages of a book, several at a time | 10 |
| 52. | ■ | Turns pages of a book, one at a time     | 11 |

### *Method*

Give a small book, such as a Ladybird picture book, and observe how the child turns pages.

### *Points to observe*

Turning pages in a book shows finger control; initially, the child turns several pages at a time (mean 2½ years) and only later develops the ability to turn one page at a time (mean 3 years).

Figure 2.7: Illustration of turning the pages of a book, one at a time (Item 52)



53.	■	Puts 10 pegs into the cup in 30 seconds	12
54.	■	Puts 8 pegs into the pegboard in 30 seconds	13

### *Method*

For Item 53, pegs are placed by the child’s preferred hand and he/she is asked to put them one by one into the cup as fast as possible. For Item 54, place the pegboard in front of the child at arm’s length. Put about 15 pegs next to the pegboard, and ask the child to put the pegs into the board one at a time as fast as possible. To score, the child must insert at least 8 pegs. For both items, use your watch or a clock in order to time the 30 seconds. You may demonstrate the test to the child once.

### *Points to observe*

Observe how the child handles the pegs. Look out for any hand tremor.

## Bricks (Tower, Bridge, Steps)

55	■ Tower of 2 bricks	1
56	■ Tower of 3 bricks	2
57	■ Tower of 4 to 6 bricks	3
58	■ Tower of 7 + bricks	4
59	■ Imitates bridge	5
60	■ Builds 3 steps with 6 bricks after demonstration	6

Items with a circled number have a cognitive element.

### Method

Give some bricks (the number depends on age: 3 for under 18 months, 4 to 5 for under 3 years, 8 for over 3 years) and ask the child to make a tower. If the child is able to build a tower with 7 or more bricks, proceed with a bridge. Demonstrate how to make a bridge and encourage the child to make one. The examiner's bridge should be left for the child to imitate. If the child builds a bridge, proceed with the 3 steps: make 3 steps with 6 bricks, give the child 6 bricks, and ask the child to 'Make one like this', leaving the steps for the child to imitate.

### Points to observe

Number of bricks	Mean age for building a tower
2	15 months (range 11 to 19 months)
4	18 months (range 15 to 24 months)
8	24 months (range 21 to 23 months)

The mean age for imitating the bridge is 3 years (range 27 to 39 months).  
The mean age for building 3 steps is 4 years.

Figure 2.8: Illustration of building a tower of 7+ blocks (Item 58)



## Drawing

⑥1	■ To and fro scribbles	1
⑥2	■ Circular scribbles	2
⑥3	■ Imitates vertical and/or horizontal line	3
⑥4	■ Imitates circle	4
⑥5	■ Imitates cross	5
⑥6	■ Imitates square	6

Items with a circled number have a cognitive element.

## Method

Give the child a sheet of paper and crayon (or a pencil or pen). The examiner should draw and encourage the child to do the same. If the child is aged 18 months or more, demonstrate drawing a vertical line and ask the child to draw the same. If the child does this, go on to draw a horizontal line. If the child does this, then go on to show the child a pre-drawn circle, cross and square and ask the child to copy them.

## Points to observe

Look for tremor, ataxia and handedness.

Pencil skills	Mean
Scribbles spontaneously	15 months
Imitates stroke	18 months
Imitates vertical line within 30°	2 years
Imitates horizontal line	2½ years
Imitates circle	3 years
Imitates cross	4 years
Imitates square	4½ years

## Draw-a-Person Test

- ⑥7 ■ Child draws head and one other part 1
- ⑥8 ■ Child draws head, legs and arms (two) 2
- ⑥9 ■ Child draws face, trunk, legs, arms 3

Items with a circled number have a cognitive element.

### Method

For children aged 3 years and over, give the child a sheet of paper and a crayon or a pencil, and ask the child to draw a person (boy, girl, man or woman). The examiner or parent should not prompt the child what to draw.

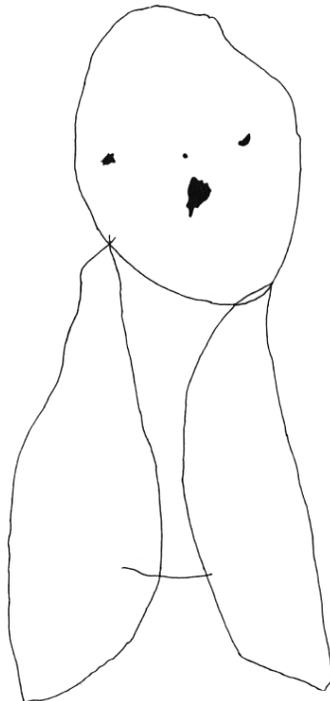
The following are examples of Draw-a-Person done at ages 3 to 5 years. Figure 2.9 shows a person drawn by a three year old child. This would score 1 as there is only one pair of appendages (arms/legs/ears?) and not both legs and arms. Figure 2.10 scores 3 as it shows the trunk as well as the legs and arms. Figure 2.11 provides a perfect example of a score of 3. Figure 2.12 is a good example of where professional judgement must come

into play when scoring this item because although this drawing should strictly score 1, the detail used suggests that the child could, if prompted, draw the trunk, legs and arms as well. In such cases it helps to look at the rest of the scores achieved in this skill section.

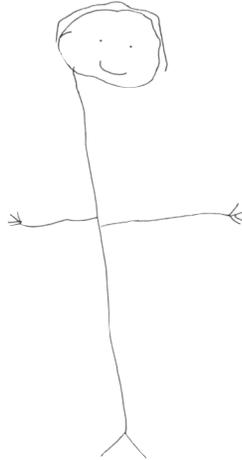
***Points to observe***

The *Goodenough–Harris Drawing Test* (Goodenough and Harris, 1963) is an acceptable standardized test for children, and a score can be obtained. It can be used independently of other tests as an indicator of the developmental age, see the *Manual of Child Development* (Lingam and Harvey, 1988).

**Figure 2.9:** Example of Draw-a-Person by a 3 year old



**Figure 2.10:** Example of Draw-a-Person by a 4 year old



**Figure 2.11:** Example of Draw-a-Person by a 5 year old



**Figure 2.12:** Example of Draw-a-Person by a 5 year old



# Vision

## Visual Skills

### Visual Function

70.	■	Turns towards diffuse light	1
71.	■	Briefly fixates on pom-pom at 30 cm	2
72.	■	Follows dangling object through 90°	3
73.	■	Follows dangling object through 180°	4
74.	■	Converges eyes on approaching object	5

### *Method*

Observe the child's ability to turn to a diffuse light, for example a window. Use a pom-pom (for babies under 6 months) or another dangling object (such as the bead on the string for older babies) and dangle it 30 cm from the child's face. Gently move the object in a pendular motion. When the child fixates on the object move it from side to side through 180° (90° either side from the middle). Slowly bring the object close to child's face and observe if eyes converge (if the baby is above 3 months of age).

### *Points to observe*

Nystagmus may be observed. Visual acuity at birth approximates to 6/60. At 4 months this changes to 6/36, and reaches 6/6 (normal) at 6 to 8 months. A squint that changes may be seen until 5 to 6 months; however, if the squint is present after 6 months or persists in one eye most of the time, referral is required.

75. ■ Finger points accurately at small object 6

**Method**

Place a small object on the table, floor, or on your hand near the child. You could use a screwed up piece of paper (7½ mm in size), a raisin or smartie, or the bead on the string for children up to 1 year, or hundreds and thousands or two grains of rice or dahl for those above 1 year. Do not allow the baby to put these small objects in their mouth.

**Points to observe**

This test checks the ability to fixate on the object. This is not a visual acuity test. While the child looks at the small object there should be no nystagmus. If there is evidence of this condition it may be congenital and benign; it can, however, also be associated with a severe defect of vision. If in doubt, it is always better to refer the child to an ophthalmologist, but if you wish to test for squint, you could use the corneal light reflection test.

**Visual Comprehension**

- ⑦6 ■ Watches falling toy, but does not look for it on the ground (no object permanence) 1
- ⑦7 ■ Looks toward the correct place for fallen toy (object permanence) 2
- ⑦8 ■ Searches for the lost toy 3

Items with a circled number have a cognitive element.

### *Method*

Hold a bright toy, such as the pom-pom, in front of the child. It is best to bring the object from outside the child's visual field into the child's visual field. While the child is looking at the object drop it, but do not move your hand. The toy should be soft, so that it does not make a noise when it falls. If the child demonstrates object permanence, drop the toy while the child is watching it, and observe the child's reaction. You may say 'Where has it gone?'

### *Points to observe*

The mean age for achieving object permanence is 8 to 9 months.

**Figure 2.13:** Illustration of looking toward the correct place for fallen toy (Item 77)



79	Watches movements of people at distance or out of window with interest	4
80	Finger points to distant objects	5

### *Method*

Observe the child’s interest in distant objects in his/her surroundings (or ask the parents about these).

### *Points to observe*

Observe whether the child is interested in people moving in the distance or watches any other activity with interest (such as watching a bird at a distance). The child should show interest and recognition (including finger pointing) to toys and other surrounding items.

81	■ Shows interest in pictures	6
82	■ Recognizes details of Picture Book	7
83	■ Completes shape formboard	8
84	■ Completes fish formboard	9
85	■ Recognizes minute details of the picture	10

### *Method*

For Item 81, give the child the Picture Book. Observe the reaction when looking at the pictures; the child does not need to name the pictures. For Items 82 and 85, give the child the Picture Book open at page 3. For Item 82, ask the child to show you the bread, cat and so on; for Item 85, discuss details with the child, and ask the child to identify finer details by pointing, e.g. to crumbs or whiskers. For Item 84, the fish in the formboard are laid in front of the child in any direction (that is, do not line them up) but they must be the right way up. The board should be presented to the child the right way round and within arms reach. For Items 83 and 84, the child must complete all pieces without assistance.

### *Points to observe*

For Item 81, the child need not name the item in the picture, but should recognize items in the picture when they are named. Recognition of pictures is a developmental landmark; there is a progression in development from recognition of real objects (at 18 months to 2 years) to miniature objects like toys (at 2½ to 3½ years) and then on to pictures (3 years onwards). However, many children are familiar with pictures from a very early age. Items 82 and 85 test the visual ability and the child's ability to interpret minute details in the picture. The examiner should ask specific questions relating to details in the pictures. Items 81 and 82 are language-dependent so if the child's language is a problem the scores from Items 83 and 84 may be more valuable.

⑧6	■ Matches 2 colours	11
⑧7	■ Matches 4 colours	12

### *Method*

Place 8 bricks in random order, 2 each of red, blue, green and yellow, in front of the child and within reach. Take 1 brick (any colour) and ask the child to show you another brick of the same colour. If the child is unable to do this, demonstrate the test by taking 2 bricks of the same colour and show the child what to do by saying, 'Look! These two are the same colour!' The remaining 7 bricks should be on the table while you hold 1 brick (any colour). Whether the child matches correctly or not, repeat the test with all the colours to check the child's ability to match all 4 colours.

### *Points to observe*

Children learn to match colours first (mean 3 years), and then to recognize colours. The child will not be able to name the colour, but if asked to show the red brick will pick it out correctly at a mean age of 3½ years. The next developmental landmark is the naming of colours, which occurs at a mean age of 4 years.

88 ■ Matches all 10 colour cards

13

### *Method*

Use the standard card with 10 colours; the corresponding colour cards are provided. Place the card with 10 colours in front of the child and, as you present the individual colour cards one by one, ask the child to point to the same colour on the card. The child must get all 10 correct to pass this item. Do **not** place matched cards on the standard 10 colour card as this would make the test progressively easier as each colour is covered and excluded from choice.

### *Points to observe*

The test is intended to look at the child’s ability to discriminate between colours, and some of the colours are very close.

89. ■ Cooperates with linear chart vision test (6 metres)

14

### *Method*

This item tests whether or not the child can cooperate with formal vision testing. If you would like to test the child’s vision formally, using a Key card or Snellen Linear Chart, you will need to check whether or not the child can read the letters on a Key card first. Sit the child down on a chair, show him/her the Key card, and ask the child to name the letters on the Key card. If the child does this successfully, continue the test without the Key card. If the child cannot name the letters, he/she should use the Key card to point to the letter shown during the test. Show the child how to cover one eye completely using an occluder. The parent could sit by the child and ensure the eye is covered during the test. From a position of 6 metres in front of the child, start by showing him/her the card with the size 60 letters and work your way down to the smallest letters. Point clearly to each letter one by one, and ask the child to name the indicated letter. Continue the test

until the child makes a definite mistake or finishes the line 6/6. Repeat for the other eye. If the child wears spectacles, the test should be done with and without them, and recorded accordingly. Alternative linear optotype vision tests, for example Lingam, 1992 or the Sonksen–Silver Acuity System (Salt *et al*, 1995), may be used according to local child health surveillance policy and practice.

### *Points to observe*

If the child can only read letter size 6/12 or less on the Snellen Linear Chart, they should be referred. Note that if a single optotype test is used, referral should be at 6/9 level because single optotype tests can overestimate visual acuity. Any child who has a difference between their eyes of two lines or more (e.g. 6/6 in one eye and 6/12 in the other) should be referred.



# Hearing, Speech and Language Skills

## Hearing and Language Skills

### Hearing Function

- |                              |   |
|------------------------------|---|
| 90. Startled by sudden noise | 1 |
|------------------------------|---|

#### *Method*

Sit the baby on the mother's lap. Cover your mouth with one hand and make a loud noise (approximately 70 dB level) at ear level at a distance of about 30 cm. Test each ear separately.

#### *Points to observe*

This is not a quantitative hearing test, but the fact that a child is startled by loud noises (70 dB) shows that he/she has hearing ability. Stilling to a loud noise is another test which would also show that the child can hear. The noise should be about 50 to 70 dB. Although babies hear well from birth (even *in utero* hearing responses have been shown) they do not have behavioural reactions. The functional thresholds are 50 dB at 3 months, 35 dB at 6 months and 30 dB at 18 months.

- |  |   |
|--|---|
| 91. Responds to voice                    | 2 |
| 92. Looks toward sound of parent's voice | 3 |

### *Method*

Ask the child’s parent to speak softly to the baby at ear level (at about 30 to 40dB level).

### *Points to observe*

From birth to 8 weeks or so, the baby’s hearing response will be elicited by sounds at 70 to 80 dB level, which is why the noise should be loud. Generally babies have a brisk Moro response (startle response) when they hear a loud noise.

## **Comprehension of Language**

93.	Turns head towards sound source	1
94.	Is attentive to everyday sounds	2

### *Method*

Observe the child’s response to sounds or voices in the room. This could be observed throughout the test procedure, or ask the parents about the child’s response to everyday sounds.

### *Points to observe*

This is not a formal hearing test, since only the ability to respond to loud sounds is observed. It is best to observe the child’s response and compare it with the parents’ reports about the child’s ability to hear. The mean age for turning the head deliberately to loud sounds is 4 months (range 3 to 6 months). In order to respond to sound in this way the child needs both good head control, which is normally achieved only at this age, and the sound source to be at ear level. This shows the child’s auditory maturity and curiosity for voices.

95.	Understands ‘no’/‘bye-bye’	3
-----	----------------------------	---

**Method**

Ask the parents (and if possible check) whether the child understands 'no'/'bye-bye'.

**Points to observe**

Understanding 'no'/'bye-bye' is achieved at about 7 months (range 6 to 9 months). The child waves 'bye-bye' at around 1 year of age.

96. Recognizes own name

4

**Method**

Call the child's name in a normal voice.

**Points to observe**

The child should respond to his/her own name, indicating that he/she knows his/her name, at a mean age of 8 months (range 6 to 10 months).

97. Shows understanding of names of familiar objects or people

5

**Method**

Observe if the child understands familiar objects (animals or people). Often it may be necessary to ask the parents if the child shows an understanding of names, e.g. dog, cat, car, cup etc.

**Points to observe**

Understanding familiar names is a difficult test to do in a clinic, and parental observations are therefore necessary. This item is achieved at around 12 to 17 months.

98. ■ Can select 2 out of 4 objects

6

### *Method*

Place the cup, spoon, doll and brush (all real size objects) in front of the child. Ask the child to point to one item at a time. Say ‘Show me the...’, using a normal conversational voice.

### *Points to observe*

If you cover your mouth with your hand or a piece of paper during this item in order to avoid lip reading, you will be able to gauge the child’s hearing. This is not strictly necessary, however, since this is a test of language comprehension and not hearing. If you wish to be sure of the child’s hearing you may use a Speech Discrimination Test, such as a McCormick Toy Test.

99.	Can point to 2 named body parts (e.g. nose and hands)	7
100. ■	Can point to doll’s body parts (e.g. eyes and tummy)	8

### *Method*

Ask the child to point to his/her own body part(s) (nose and hands), and then ask the child to point to the doll’s body parts (tummy, eyes).

### *Points to observe*

If the child is unable to point to two body parts do not score. The mean age for pointing to real body parts is 15 months, and doll’s body parts 18 months.

101. ■	Follows a two-step command	9
--------	----------------------------	---

### *Method*

Leave the cup, spoon, doll and brush in front of the child. Ask the child to ‘Give the doll a drink’ or ‘Brush the doll’s hair’.

***Points to observe***

The child should obey the command and not just imitate (pretend play). The objects used in this test are real size objects (not miniatures) because children do not comprehend the concept of miniature toys until after their second birthday. The concept of real objects and their usage begins from 15 months. A two-step command is performed at a mean age of 2 years.

102. ■ Shows understanding of verbs, using action pictures 10

***Method***

Show the action pictures on page 1 of the Picture Book. Ask the child:

- (a) Which one is sitting?
- (b) Which one is sleeping?
- (c) Which one is eating?
- (d) Which one is running?

***Points to observe***

The child should point to the right picture for 3 out of 4 questions (for a score of 10). Understanding simple verbs (sitting, sleeping, eating, running) comes at around 24 to 30 months.

103. ■ Shows understanding of functions of objects, using pictures 11

***Method***

Show the picture on page 2 of the Picture Book. Ask the child:

- (a) Which one do we drink from?
- (b) Which one do we sleep in?
- (c) Which one do we kick?
- (d) Which one do we draw with?

***Points to observe***

The child should point to the right picture for 3 out of 4 questions (for a score of 11). Functional understanding develops between 21 and 33 months.

104. ■ Shows understanding of prepositions

12

***Method***

Obtain a small table or chair if possible (if not, use any suitable space), and give the child a small object (such as a small toy car or one-inch brick) and ask the child to put it:

- (a) under the table or chair.
- (b) on the table or chair.
- (c) behind the table or chair.

***Points to observe***

The child should perform correctly at least 2 of the 3 items. Understanding prepositions occurs at a mean of 30 months. There are various other ways of carrying out this test, and some modifications are possible using other objects that are not obviously related. It is important not to use a doll and a chair or a bath because the child will automatically put the doll on the chair or in the bath. It is important to make sure that the child understands the prepositions ‘under’, ‘on’, and ‘behind’.

105. ■ Shows understanding of size adjectives

13

***Method***

Show the pictures on page 3 of the Picture Book. Ask the child to show:

- (a) Which one has the smallest nose?
- (b) Which one has the longest tail?

***Points to observe***

The child should point to all the correct answers (to score 13). Understanding size adjectives occurs at a mean of 3½ years. As an alternative, the pictures on page 4 can be used; ask instead ‘which is the smallest boy?’ or ‘which is the bigger spoon?’.

106. ■ Shows understanding of negatives

14

***Method***

Show the pictures on page 4 of the Picture Book. Ask the child the following:

- (a) Which one has no shoes?
- (b) Which one is not drinking?
- (c) Which one is not a spoon?

***Points to observe***

All responses must be correct. Understanding single negatives occurs at a mean of 3 years.

107. ■ Follows a command with two instructions

15

***Method***

Give the child the following instructions: ‘Put the doll on the floor and then go and touch the door’.

***Points to observe***

This is a simple test of complex language comprehension and auditory memory. It occurs at a mean of approximately 3½ years.

108. Understands complicated questions

16

**Method**

Ask the child one of the following questions:

- (a) What would you do if you fell over and hurt your knee?
- (b) What would you do if you got lost?

**Points to observe**

The child’s answers demonstrate understanding of the question at a sophisticated level. A one word or very simple reply is not adequate.

109. ■ Follows a command with three instructions	17
--	----

**Method**

Place a spoon, cup and doll in front of the child and ask: ‘Before you give the cup to Mummy, put the spoon on the floor and give me the doll.’ Repeat the instructions once or twice more, if necessary.

**Points to observe**

The instructions must be carried out in the right order. A child is able to follow 3 commands consecutively at a mean age of approximately 4½ years.

110. ■ Understands negatives in complex sentence statements	18
---	----

**Method**

Place a brush, spoon and cup in front of the child and ask: ‘Which one is neither for eating nor for drinking?’ You can repeat once or twice more, if necessary.

**Points to observe**

Understanding negatives in complex statements is 4 to 4½ year level.

Language Comprehension	Mean	Range
Understands 'no'/'bye-bye'	7 months	6 to 9 months
Recognizes own name	8 months	6 to 10 months
Understands familiar names	12 months	10 to 15 months
Selects 4 objects	15 months	12 to 18 months
Points to body parts on self/carer	15 months	12 to 18 months
Points to body parts on doll	18 months	15 to 21 months
Follows a 2 step command	2 years	18 to 27 months
Functional understanding	2½ years	21 to 33 months
Understands prepositions	2½ years	2 to 3 years
Understands simple negatives	3 years	2½ to 3½ years
Understands comparatives	3½ years	3 to 4 years
Follows a command with 2 instructions (4 ideas)	3½ years	3 to 4 years
Understands complex negatives	4 years	3½ to 5 years
Follows command with 3 instructions (6 ideas)	4½ years	4 to 5½ years

## **Speech and Language Skills**

### **Vocalization**

- |  |   |
|--|---|
| 111. Makes occasional grunting sounds                              | 1 |
| 112. Vocalizes when pleased  | 2 |
| 113. Laughs, chuckles and squeals in play                          | 3 |
| 114. Babbles continually and tunefully                             | 4 |
| 115. Imitates adults, playful sounds (coughs, 'brrr', smacks lips) | 5 |

### *Method*

Observe and see if the baby makes any noise. This can be done at any time during the examination. The mother is allowed to encourage and play with the child, or the examiner could speak in a friendly way to the child and observe the response. Babbling means the ability to make repetitive consonant–vowel sounds. To pass this item the child does not need to make different sound combinations but one sound, e.g. ba–ba–ba/ma–ma–ma will suffice.

### *Points to observe*

Monosyllabic babbling (labial consonants: p,b,m) comes first. Polysyllabic babbling (consonant–vowel: mamma) comes next. Early consonants are nasal sounds (m,n); front consonants (t,b,d) followed by back consonants (k,g) are the normal babbling response. The vowels (‘ah’, ‘ee’, ‘oh’, ‘oo’) come much later.

Early language development	Mean	Range
Makes grunting sounds	4 weeks	1 to 6 weeks
Vocalizes when pleased (coo)	6½ weeks	4 to 9 weeks
Laughs, chuckles	3½ months	2 to 5 months
Babbles (monosyllabic)	6½ months	4 to 8 months
Imitates adult sounds	10 months	8 to 12 months

## **Expressive Language**

- |  |   |
|--|---|
| 116. Uses incessant jargon containing vowels and many consonants | 1 |
| 117. Uses one word with meaning                                  | 2 |
| 118. Communicates by mixed gesture and vocalization              | 3 |
| 119. Uses several words with meaning (at least 4)                | 4 |

120. Uses more than 7 words with meaning	5
121. Attempts to repeat words when used by others	6
122. Puts 2 or more words together to form simple sentences	7
123. Names familiar objects and pictures	8
124. Speech usually understood by mother	9
125. Uses question words (e.g. what, where?) and uses two personal pronouns (e.g. me, you)	10
126. Able to carry on simple conversations and describe events	11
127. Knows several nursery rhymes or pop songs or commercials	12
128. Can give fuzzy account of recent events	13
129. Speech fluent and clear	14
130. ■ Can produce a sentence of 5 or more words	15
131. ■ Can describe a sequence of events	16
132. ■ Can give an explanation of events	17

### *Method*

Listen to the child's expressive language and communication skills. Use simple toys to encourage communication. For Items 130 and 131, use the cat and mouse story in the Picture Book, and ask the child to tell a story about the series of pictures. For Item 130, a factual description of events is required. For Item 131, a more abstract explanation of why events happened is required. For Item 132 go on to ask the child, 'Why is the mouse running away from the cat?' or 'What would happen if the mouse could not get into the hole?'. To pass this item, the reply should be a fairly long (6+ words), grammatically correct sentence. Observe the child's communication throughout the test, and ask the mother for confirmation or examples.

### *Points to observe*

Observe how the child speaks, not just what is said. A degree of dysfluency or immature speech is allowable. If the child's speech is not easily understood, this would warrant referral to a Speech and Language

Therapist. All the speech and language skills items may need a skilled interpreter (Linkworker) for those children who do not speak English. The interpreter must understand the purpose of the test. A parent or other family member is not a suitable interpreter for the child.

Language Expression	Mean	Range
Jargon	12 months	10 to 15 months
One word	15 months	12 to 18 months
1 to 6 words	18 months	15 to 21 months
7 to 20 words	21 months	18 to 24 months
50+ words	2 years	18 to 27 months
2 words joining	2 years	18 to 30 months
200+ words	2½ years	24 to 36 months
3 to 4 words joining	2½ years	2¼ to 3 years
Speech usually understandable	2½ years	2½ to 3½ years
Question words	3 years	2½ to 3½ years
Pronouns	3½ years	3 to 4 years
Uses conjunctions (and, but)	4 years	3 to 4½ years
Sentences of 5+ words	4 years	3 to 4½ years
Complex explanations and sequences	4½ years	4 to 5½ years

# Social Development

## Interactive Social Skills

### Social Behaviour

133. Smiles

1

#### *Method*

Smile at the child (do not touch, stimulate or make a sound). Score if the child smiles spontaneously.

#### *Points to observe*

Spontaneous smile (that is, without stimulation) begins very early (3 to 4 weeks) and 90 per cent of babies achieve this by 6 weeks.

134. Responds to friendly handling

2

#### *Method*

Pick up the baby, and cuddle or stroke his/her hair.

#### *Points to observe*

The baby should show pleasure by laughing or looking excited. Babies with developmental delay and learning disabilities, and those with early features

of autism, might not respond. This behaviour is found at approximately 3 months.

135. Enjoys bathing and caring routines 3

***Method***

Ask the parents if the child enjoys bathing and caring routines.

***Points to observe***

This is also a behaviour seen at 3 to 4 months.

136. ■ Takes everything to mouth (mouthing) 4

***Method***

Give a brick to the child and encourage him/her to take it.

***Points to observe***

The child usually takes the brick and puts it in his/her mouth. The child transfers (passes objects from one hand to the other) and mouths at the same time, usually at 6 to 8 months. This behaviour should stop by 1 year of age; persistence or reappearance after 1 year is abnormal and usually represents significant learning disabilities (mental retardation) or a behavioural problem, such as autistic features or autism.

137. Shows annoyance when frustrated 5

***Method and Points to observe***

Observe if the child gets angry or upset when unable to do something.

138. Plays clapping or waves 'bye-bye'

6

***Method***

Observe or ask if the child is able to clap or wave bye-bye' at appropriate times.

***Points to observe***

Simple hand-clapping is a 10 to 12 months behaviour. Pat-a-cake and rhythmic pat-a-cake is a 14 to 18 months behaviour.

139. Explores objects in immediate surroundings

7

***Method***

Observe the child in his/her surroundings.

***Points to observe***

Observe whether the child explores everything: opens and closes doors, take toys and plays appropriately. It is normal to be curious and restless regarding people, objects or events in immediate surroundings. This behaviour is appropriate for a child of 15 months. However, some older children, usually those with severe learning disabilities or autism, occasionally show this type of behaviour, but in a ritualistic rather than an imaginative manner.

140. Imitates everyday activities

8

***Method***

Ask the parents if the child copies household activities such as cleaning, washing or brushing.

***Points to observe***

This is a behaviour seen at 15 to 18 months.

**Figure 2.14: Illustration of imitating everyday activities (Item 140)**



141. Rebellious behaviour

9

***Method***

Ask the parents about the child’s behaviour when thwarted, for example if the television is switched off for a meal while the child is watching, or if the child is instructed to come to the table when absorbed in play.

***Points to observe***

Resistance, temper tantrums and rebellious behaviour when thwarted are normal from 18 months onwards up to about 3½ years. After 4 years, this behaviour should improve because the child will develop listening skills and understand daily household routines.

142. Plays with other children but will not share toys	10
①43 Shares toys	11

Items with a circled number are likely to have a cognitive element.

### *Method*

Ask the parents about the child sharing toys at play.

### *Points to observe*

Observe whether the parents say that the child plays with others and does or does not share toys. At 2½ years the child has little notion of sharing, but by 3 to 3½ years of age children begin to share with friends.

①44 Shows concern for siblings and playmates	12
145. Actively helps siblings and playmates	13

### *Method*

Ask the parents what the child will do if a sibling or a friend gets hurt. You might ask the question as follows: ‘Some children seem to show great concern for their brothers and sisters and friends if they are in trouble or hurt, and others don’t. What does your son/daughter tend to do in these circumstances?’

### *Points to observe*

Observe whether the parents say that the child shows concern, and actively goes and helps siblings or friends. Concern and sympathy for siblings and playmates is a 4 year old behaviour; actively getting help is a 5 year old behaviour. Children with autism show an inability to interact socially, and also perform poorly on language items.

146. Chooses best friends	14
---------------------------	----

### ***Method***

First ask the child whether he/she has a best friend, and then ask for the name of the friend.

### ***Points to observe***

The child should give the name of a friend. Children choose a best friend at 4 to 5 years of age and should be asked to give the name of the friend at this stage. An autistic child is very unlikely to name a friend at any age.

## **Play**

147. ■ Shakes rattle	1
----------------------	---

### ***Method***

Offer a rattle and observe whether the child reaches for it and can shake it to make noise.

### ***Points to observe***

The child should reach for the rattle and shake it deliberately to make sound. This is a 6 month old behaviour.

148. ■ Finds toy that is partially, but not wholly, hidden	2
149. ■ Quickly finds hidden toy	3

### ***Method***

Hide a brick or a small toy car under a cloth or piece of paper, and for the first part of the test cover it partially. If the child finds it, repeat the test by covering a different toy completely. The child should see that you are hiding it.

***Points to observe***

By 7 to 9 months the child begins to develop object permanence and therefore will go for the toy if it is partially hidden. At 12 months, the child will quickly find the toy when it is hidden fully. A child who takes a while to find the toy has not developed object permanence, and may find the toy accidentally after a period of time.

- ①50 ■ Explores properties and possibilities of toys and other objects with interest

4

***Method***

Give the child the doll and watch how the child explores details on the doll (e.g. lifts dress, pulls hair).

***Points to observe***

Children with autistic features or autism may play with toys mechanically but will not explore them with interest and imagination.

151. Plays contentedly alone or near familiar person

5

***Method***

Ask parents if the child will play alone for at least 5 minutes.

***Points to observe***

At 12 to 15 months the child will play alone if a familiar person is nearby. It is only by 3 years that separation is possible; however, separation anxiety decreases from the age of 2½ years. A child with learning disabilities may not have separation anxiety, and so separation is possible.

152 Plays skilfully

6

**Method**

Ask the parents if the child can push and pull large toys, such as a toy pram, tricycle, toy car, without hitting the door or wall most of the time.

**Points to observe**

This skill (and Items 153 and 154) involves motor ability, and children with motor impairment will attain lower scores. If you are concerned about the child’s ability on these items you should refer.

153. ■ Kicks a small ball

7

**Method**

Place the ball on the floor and ask the child to kick it. You may demonstrate, and repetitions are allowed.

**Points to observe**

Observe whether the child makes an attempt to kick and make the ball move; the child should not fall. An accurate kick is not necessary, but the child’s foot must make contact with the ball. Boys master this skill earlier than girls. This is a 2½ year play skill.

154. ■ Throws small ball over-arm

8

**Method**

Give the ball to the child and ask the child to throw it to you or to his/her parent. Stand about 2 feet in front of the child, and ensure the child is throwing the ball well away from the window.

***Points to observe***

Score if the child throws the ball above the shoulder. The throw should be deliberate and over-arm; an under-arm or shoulder-level throw is not allowed. At 2½ years the child will be able to hold the ball over the head to throw; under-arm throwing is 18 months to 2 years play activity and throwing at shoulder height is 2 years level.

(155) ■ Takes turns in play

9

***Method***

Put 1 peg in the cup or pegboard, and ask the child to put a peg in each time you put one in. Make this a game and watch if the child has the concept of turn taking. You may do this using another similar toy (man in the boat for example).

***Points to observe***

Score if the child demonstrates the concept of turn taking.

(156) Engages in cooperative and imaginative play, observing rules 10

***Method***

Ask the parents how the child likes to play, and then expand to ask them whether the child observes the rules of the game.

***Points to observe***

Play should be both imaginative and cooperative. At the 4½ to 5 year level a child should have the concept of rules. This will be needed when the child goes to school, and is considered a skill for school readiness. Autistic children will not be able to pass this item.



# Self-Care

## Self-Care Social Skills

### Feeding

157. Puts hand up to bottle when feeding 1

#### *Method*

Preferably observe the skill, or ask the parents if the child reaches out for a bottle (if bottle fed only) or goes for the breast (if breast fed).

#### *Points to observe*

The child should deliberately go for the bottle or breast. This is a 6 month behaviour, and the child need not hold the bottle or breast.

158. Grabs spoon 2

#### *Method*

Ask the parent if the child will try to grab the spoon (for children taking solids).

#### *Points to observe*

The child should go for the spoon. This is an 8 to 9 months behaviour.

159. Holds, bites and chews finger food 3

**Method**

Ask the parents if the child can hold and bite (and chew) a biscuit, rusk, bread or small pieces of fruits or vegetables.

**Points to observe**

This is a 9 to 10 months old behaviour.

160. Drinks from a feeder cup with assistance 4

**Method**

Ask the parents if the child can drink from a beaker with a lid or feeder cup when the parent is holding it.

**Points to observe**

This is a 12 months behaviour.

161. Holds spoon but does not feed 5

162. Holds spoon and brings it to mouth but cannot prevent it turning over 6

163. Holds cup with both hands and drinks without too much spilling 7

164. Holds spoon and gets food safely to mouth 8

165. Lifts cup with one hand, drinks and replaces it 9

**Method**

Ask the parents about how the child uses the spoon, and whether the child can hold a spoon and feed. Ask the parents if the child drinks from a cup; in particular, ask if the child uses both hands to hold the cup or uses one

hand only. Also check whether the child is skilful in using the cup (that is, without spilling).

### *Points to observe*

Some children might not be able to perform this skill because of physical disabilities, such as cerebral palsy or limb deformities.

166. Eats skilfully with spoon	10
167. Eats skilfully with fork and spoon	11
168. Eats with fork and knife or hands/chopsticks (with a little help only)	12
169. Copes with entire meal unaided	13

### *Method*

Obtain information from the parents about eating skills; ask about the use of spoons, fork and spoon, fork and knife, and depending on culture, eating with fingers or with chopsticks. For these items a steady increase in skilfulness of feeding is required. For Item 168 the child should sit at the table and eat well, using eating utensils or hands expertly. The mean age for eating skilfully with a spoon is 2½ years. Eating with a fork and spoon is a 4 year old level, and handling a knife skilfully is a 5 year old level. Children with dyspraxia or motor incoordination due to any cause often have difficulty feeding themselves, and can rarely use a knife and fork efficiently.

*Points to observe*

Spoon skills	Mean
Holds spoon but does not feed	12 months
Holds spoon brings it to mouth but cannot prevent it turning over	15 months
Holds spoon and gets food safely to mouth	18 months
Eats with spoon skilfully	2 to 2½ years
Eats with fork and spoon	3 years
Eats skilfully with little help (fork and knife, hand, chopsticks)	3½ to 4 years
Copes with entire meal unaided (cuts food into pieces, breaks food using chopsticks etc.)	5 years

**Figure 2.15:** Illustration of eating skilfully with a spoon (Item 166)



## Toileting and Dressing Skills

170. Indicates wet or soiled pants by crying or wriggling	1
171. Anticipates toilet needs by restlessness or vocalization	2

### *Method*

Ask the parents about the child's toileting level.

### *Points to observe*

None.

172. Dry during the day	3
173. Vocalizes and/or attends toilet needs in reasonable time	4
174. Usually dry at nights (understands concept)	5

### *Method*

Ask the parents if the child announces toilet needs in advance, either by action or vocalization.

### *Points to observe*

The mean age for bowel control is 3 years (range 2½ to 4 years) and 4½ years (range 3½ to 5½ years) for bladder control, excluding occasional accidents. Girls master these skills a little earlier than boys. Some children may not be dry at night for a long time; this test is about the *concept* of not wetting the bed (the child tried to be dry).

Development of urinary continence	Range
Empties bladder day and night (reflex)	Up to 6 months
Empties bladder less frequently, up to 8 times in 24 hours (CNS inhibition of reflex)	6 to 12 months
Indicates or vocalizes toilet needs or wetness (perception of bladder fullness)	1 to 2 years
Able to postpone urination during the day	3 to 4 years
Able to postpone urination during the night	3½ to 5 years
Able to consciously control voiding, and micturate on command	4 to 5 years

175. Washes hands	6
176. Washes and dries hands, and attempts to brush teeth	7
177. Washes and dries face and hands completely	8

### *Method*

Ask the parents about the child’s washing and teeth-brushing skills. Children under 7 years of age should be supervised while they are brushing their teeth to ensure that they have cleaned them properly.

### *Points to observe*

Washing hands but not drying them occurs at 3 years of age; washing and drying hands occurs at 4 years of age.

178. Dresses and undresses alone, excluding fastenings	9
179. Dresses and undresses alone, including buttons and fastenings	10

### *Method*

Ask the parents how far the child has got with dressing and undressing.

### *Points to observe*

Dressing and undressing is a 3½ to 4 year old behaviour. Dressing and undressing completely alone is a 5 year old behaviour. Since children's clothes often do not have fastenings and tend to be 'pull on', ask the parent whether the child is able to fasten or button clothes. Most school clothes have some sort of fastening.

**Figure 2.16: Illustration of dressing and undressing alone (Item 178)**





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The *Schedule of Growing Skills II* is a developmental screening procedure designed for use by health visitors, general practitioners, paediatricians and other professionals involved in the care of young children from birth to five years old.

Based on the first edition of the *Schedule of Growing Skills*, this new edition has been trialled extensively and standardized to make it a reliable and statistically valid tool. A Cognitive element has been derived from the existing nine skill areas, and information about the validity of *SGS II* is provided. This edition also includes revised and expanded administration instructions, attractive new testing materials and a wide-ranging discussion of *SGS II* as part of a comprehensive child health programme.

The User's Guide contains full administration instructions on how to assess and score the children. It also provides detailed information on the individual skill areas, outlining best practice. Attractive new drawings illustrate some of the skills to be attained by the children. The User's Guide also enables the administrator to complete the Record Form, and transfer this data onto a profile of the child's development using the Profile Form.

The *Schedule of Growing Skills II* includes:

- a Reference Manual that discusses the development and implementation of *SGS II*.
- a User's Guide that gives information on how to administer, score and interpret the assessment.
- a Picture Book and other testing materials to be used in conjunction with the User's Guide.
- Record and Profile forms to trace the child's development in the nine different skill areas as well as in the new Cognitive section.

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